

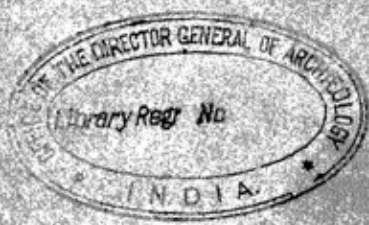
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THE HUMANISTIC VALUE
OF ARCHAEOLOGY

MARTIN CLASSICAL LECTURES

VOLUME IV

BY

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PROFESSOR OF CLASSICAL ARCHAEOLOGY IN BRYN MAWR COLLEGE
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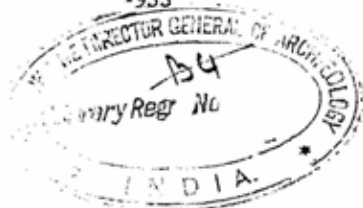
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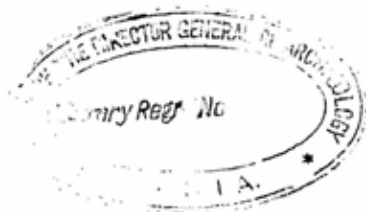
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THE MARTIN CLASSICAL LECTURES

VOLUME IV

The Martin Foundation, on which these lectures are delivered, was established by his many friends in honor of Charles Beebe Martin, for forty-five years a teacher of classical literature and classical art in Oberlin College



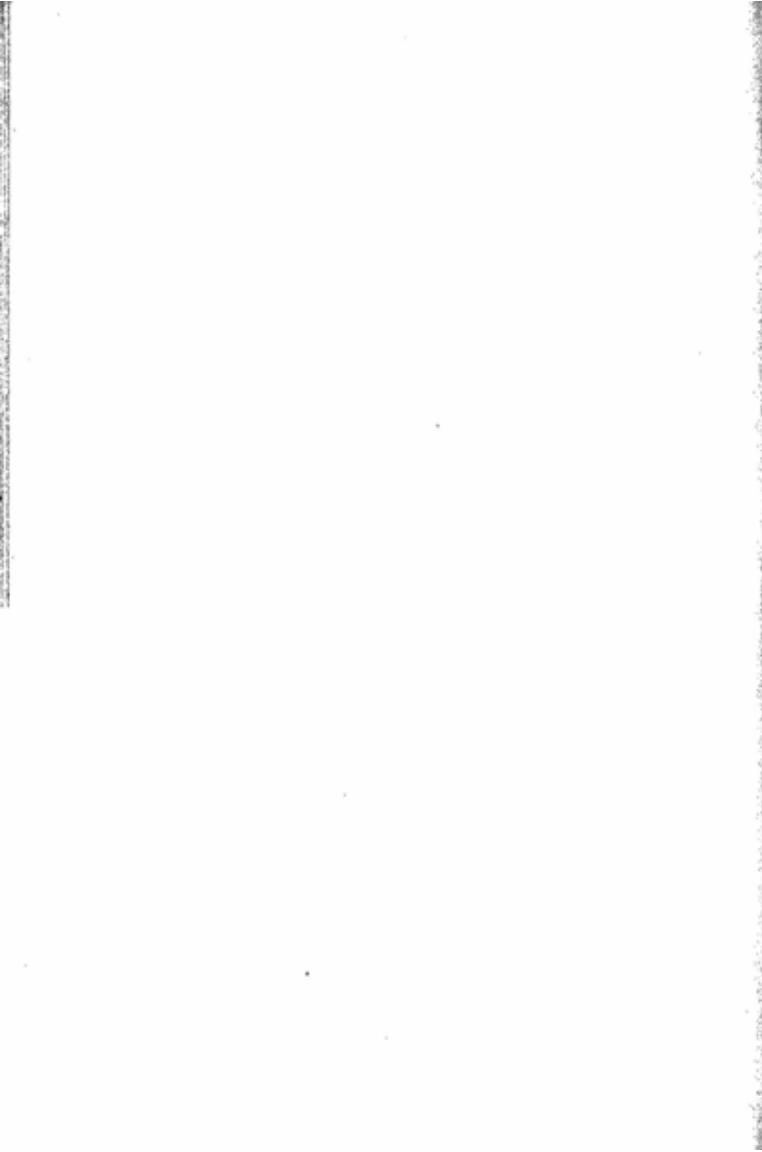
PREFACE

SINCE it is the long-established custom of readers and reviewers alike not to commend a book for what it is, but to quarrel with it for what it is not, I hasten to introduce between title-page and text this warning that the "archaeology" soon to be discussed is only the archaeology of the classical land of Greece. To complain that this brief volume fails to be a critique of the entire field of archaeological endeavor is to rebel against the higher authority which stipulates that the Martin Classical Lectures shall fit the classical last. My responsibility was not to change the traditional shape of the shoe, but only to see that my leather was of proper quality and serviceably cut.

R. C.

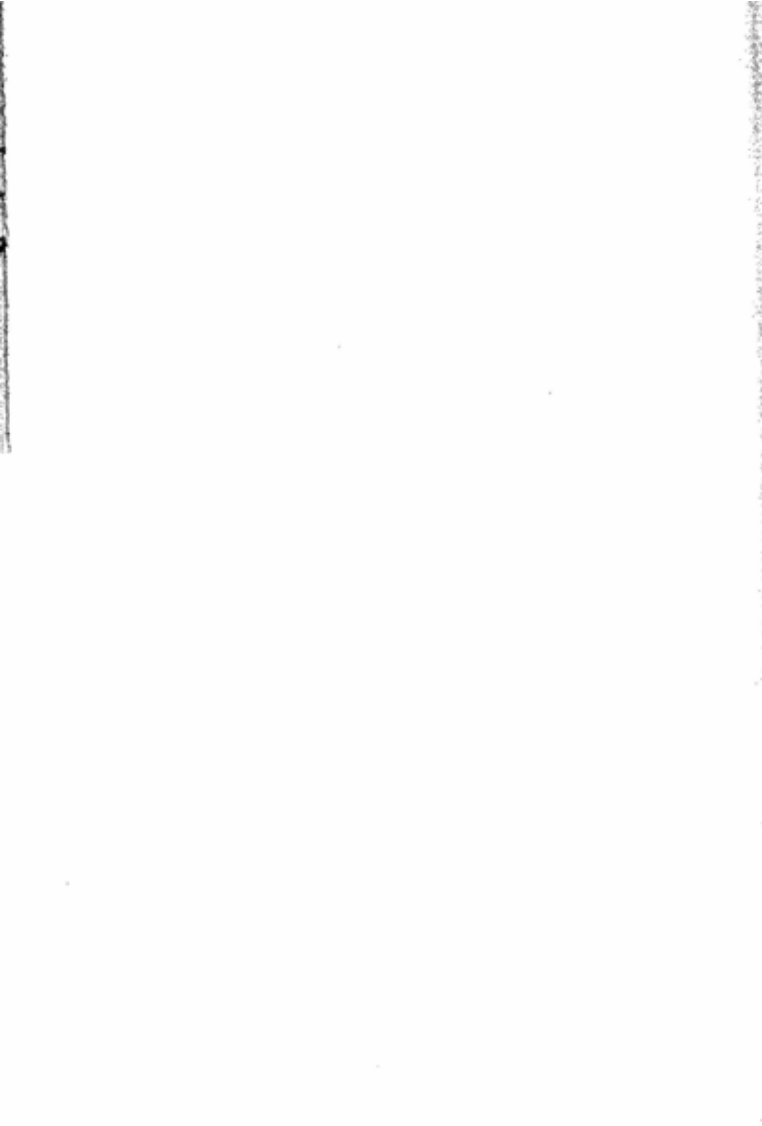
BRYN MAWR, PENNSYLVANIA

August, 1933



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THE HUMANISTIC VALUE
OF ARCHAEOLOGY



THE ARCHAEOLOGICAL APPROACH

IT IS a common saying — especially among the Germans — that Winckelmann was the father of archaeology. Like all such epigrammatic generalisations, the saying will not survive close scrutiny and yet owes its persistence and popularity to a certain undeniable measure of truth. Winckelmann was not by any manner of means the first modern historian of art nor the first to look at art critically rather than emotionally. The Renaissance had opened up the field long before him. It is hard to point in Winckelmann to any specific accomplishment which some earlier artistic *litteratus* could not have equally well possessed. And yet with Winckelmann a new epoch undoubtedly opens, an epoch marked by a new spirit, a new approach to antiquity; and in this approach lies the essence of the archaeological method.

This new spirit was objective, matter-of-fact, materialistic; in consequence, deliberately unimaginative, on occasion even stupid. It is difficult for a person of quick wit and lively intellect to become a good archaeologist. That is one reason why it has taken so long to breed archaeologists among the Latin races of Europe to-day. The Latin (and Levantine) brain visualises the conclusion before it has collected all the premisses: it is therefore too intelligent to be archaeologically minded. The Teutonic brain, on the con-

trary, is content to inspect all its hurdles before jumping them. It is willing to collect evidence even though it never draws any conclusions. And the mere collection of evidence was the first and greatest necessity before archaeology could become useful and effective. Winckelmann was a splendid instance of the unhurried Teutonic temperament brought into prolonged contact with the versatile and volatile humanistic traditions of Italy. And because he brought to humanism a northern spirit of materialistic realism, of calm and caution, of straightforward actuality in all things, he personified a new attitude toward art. Sentimental he seems to us of to-day in most of his admirations and mistaken in many of his inferences; but through the fog of romanticism and the prejudices of his time, his was the love of the actual above all make-believe and mere tradition. And to look for the actual in things ancient and to prize the actual beyond all else, is the first step toward becoming an archaeologist.

Winckelmann was an archaeologist, but not an excavator. However, at Herculaneum and Pompeii in 1762 he saw excavation in progress and was enthusiastic over the wealth of ancient art which might thus be recovered. The excavation practised in the eighteenth and early nineteenth centuries was not always very clearly distinguishable from the tomb-robbing and organised pilfering which has been taking place throughout the ages. Mankind has always dug for treasure: from the very dawn of civilisation, whatever of value one man has buried or lost another has soon

thereafter sought to recover. Thus when Greek Corinth was destroyed by the Romans and later recolonised from Italy by command of Julius Caesar, the newcomers are recorded to have made a tidy income by ransacking the old Greek tombs for objects to sell in the art-market of Rome. So abundant and so distinctive was this plunder that a special epithet *necrocorinthia* was coined to designate the objects thus derived. In modern times the Etruscan tombs were ransacked in precisely this manner and the Greek vases which they contained were similarly sold to rich and enlightened collectors in Italy, England, and elsewhere. All this is not archaeology, even though the plunder may in time become respectable and important material for the archaeologists. To have discovered that the finest of these "Etruscan urns," as they were called, were actually Greek vases imported by the Etruscans was the first step in the archaeological penetration of this domain of commercialised pilfering. The nineteenth century succeeded in determining the date of these various Greek vases with very remarkable accuracy, and the twentieth century carried archaeological method to such an amazing refinement that even the ancient artists who painted the vases were identified by the telltale indices of personal touch and individual style. But all this was not archaeological excavation.

In much the same manner that Winckelmann has been dubbed the father of archaeology, his fellow-countryman Schliemann has been popularly envisaged as the father of archaeological excavation. With

even less justification, to be sure. Long before, the English Society of Dilettanti dug on the sites of the ancient temples of Greece and Asia Minor with no more worldly purpose than a desire to ascertain more exactly the details of the masterpieces of classical architecture. Schliemann, though he found more marketable treasure than the Dilettanti's envoys, was inspired by the same motive of intellectual curiosity. Whatever we may think of Schliemann's technical methods of digging, there is a cardinal difference between his search for Priam's gold, for Mycenae's buried kings, and the act of a piratical contemporary of Captain Kidd searching and sounding for that redoubtable gentleman's secret stores of wealth. Where the latter sought only his own personal gain, — pieces-of-eight and bars of bullion to use for his own advancement in the world's market-place, — Schliemann made no effort to hold for himself his marvellous treasure-troves. The gold of Mycenae is safely housed in the National Museum at Athens and the gold of Troy is in Berlin, while Schliemann died content, having proved that Homer was history as well as poetry and that the ancient legends of the house of Atreus were grounded on actual fact. To have actualised by concrete material evidence the seeming myth of a national epic, to have made legendary times objective and tangible, to have applied that most matter-of-fact and unimaginative test to antiquity by looking to see whether it was still underground on the very spot — all this was to have created archaeology.

None the less, neither Schliemann's outlook nor his methods were new in the world. I have already referred to the scientific expeditions of the English Society of Dilettanti. But the earliest archaeological excavation on record is vastly older. Since the passage is not well known, it deserves transcription. The writer is Plutarch and the time of writing is shortly after the year 100 A.D., but the scene is supposed to be laid nearly 500 years earlier. Since there is every internal indication that Plutarch is describing the contents of a real tomb, probably "Mycenean" and probably one of those tumuli near Haliartos by the side of the Copaic Basin, whose traces are still visible to-day, it remains a difficult question whether Plutarch is describing a contemporary event or utilising an earlier record.

I was longing to hear [says a certain Theocritus in Plutarch's story] about the general appearance and contents of the Tomb of Alkmene when it was opened.

Pheidolaos replied, No vestige of a body was to be found, but only a bronze bracelet of no great size and two earthen pots full of petrified soil and a bronze tablet with letters of most remarkable antiquity, which were quite impossible to read even though when the bronze was washed they were perfectly clear to see. The character of the writing was unique, unGreek, perhaps most like the Egyptian; wherefore Agesilaos sent a copy to the king of Egypt with a request to show it to the priests and see whether they could make anything out of it.

A little later in the story it transpires that the Spartan envoy handed the writings to an Egyptian high-priest who "in solitary retirement searched for three

days through ancient books of writings from all countries of the world" and finally announced "that the letters bade hold a musical competition; and that the characters belonged to the alphabet in use when Proteus was king, the one which Herakles learned to use."

Here we have all the essentials of scientific investigation: intellectual curiosity instigating the undertaking; thoroughness in gathering the material evidence; intelligent scrutiny of the results, involving an appeal to established authority for their proper interpretation. We even encounter in the Egyptian high-priest that ultra-modern (yet perennial) phenomenon, the specialist with a reputation, who fabricates his information rather than admit that he does not know his subject.²

Schliemann's campaigns did not mark any noticeable advance on the method of excavation which Plutarch here describes. To Schliemann excavation was much what it still is to-day to the majority of the general public — the process of removing valuable objects, preferably gold, from the soil by opening up the ground with pick and shovel. In a recent fantastic film, in which the tomb of Jengis Khan is discovered, Hollywood has put itself on record as believing that the archaeologists of the party actually wield the pick and shovel themselves; and I am prepared to suppose that this may be a fairly widespread notion, judging by a certain undertone in questions that are often directed to me when it leaks out that I have been engaged in excavation in Greece. For those who share Hollywood's illusion, and for others much more so-

phisticated, the sole value of the earth thus stalwartly disturbed by the excavator resides in the kindly care with which it has prevented other more miscellaneous brigands from carrying off the treasure before the archaeologist managed to arrive upon the scene. Obviously, once the treasure has been scented out, the best and only thing to do with the earth is to dig it away and get rid of it as expeditiously as possible. Thus, generations ago, Pompeii was dug. As the dust and ashes from the Vesuvian eruption were removed, the wreck of the ancient houses emerged. A narrow-gauge railway was laid, and strings of cars moved ceaselessly to the dump. Whatever was valuable was intercepted; the rest was shoveled into the cars and removed. When all the dirt and debris had been cleared from a house, the excavation was considered finished and the excavators moved their track to the next dwelling.

How differently the well-trained and admirably competent Italian archaeologists of to-day are continuing the long task of uncovering Pompeii!

Primarily, the change in the technique of excavation depends on a realisation that the whole history of a site may lie hidden, not under the soil accumulated upon it, but in that very soil itself. In Pompeii, to be sure, there is not everywhere much history to be sought. The eruption of Vesuvius in 79 A.D. put an abrupt end to the life of a prosperous little town, comparatively few of whose houses were more than a century old. Yet even so, the earth and ashes over the floors and foundations and courtyards and streets

hold many a record which previous generations had not taught themselves to read. To remove that earth is to destroy these records. It is a popular saying among archaeologists to-day that to dig a site is to destroy it; and one of the factors which most inclines them to infinite patience and all-embracing orderliness is the realisation that they are burning the book of history page by page as they read it.

The sections of Pompeii which were the first to be uncovered show almost everywhere only the lowest story or ground floor of the houses, whereas the quarter most recently dug, in the so-called *scavi nuovi*, is notable for its two-story structures. It may be granted that a good part of the material out of which these upper portions are constructed is entirely modern and has been inserted by the excavators themselves. Yet an ancient wooden beam could not char and burn without leaving its trace of charcoal and its dimensions, nor could a roof or ceiling crash and fall except as the universal dictates of gravitation enjoined. The hot ashes from Vesuvius must have instantly destroyed the tiny gardens and flower-boxes in the courtyards; yet every plant possesses its specific growth of root in characteristic arrangement and form, so that a modern botanist can frequently identify the bush or plant which was growing in 79 A.D., and a judicious visit to florist or a nearby hillside can make the garden destroyed two thousand years ago bloom once more in 1933. These resuscitated gardens of Pompeii may be taken as a symbol of the new archaeology.

* * *

At Corinth the American School of Classical Studies has recently uncovered the remains of a small theatre of the type known in antiquity as an odeion, or recital hall. An ancient writer, Philostratos, makes reference to this structure and leads one to suppose that it was erected in the Antonine period through the munificence of Herodes Atticus, who built the covered theatre on the southwest slope of the Acropolis at Athens. But the process of removing the earth and debris which had accumulated over the ruins of the Corinth odeion told a different story. Around the back of the building, underneath the uppermost tiers of seats, there ran a monumentally solid corridor with vaulted ceiling of concrete and floor and foundations partly of cast concrete and partly of hewn stone. In order to cast and set these, the builders had originally cut trenches through the soil, and on examination by the excavators this soil was found to contain masses of sherds from the Augustan period but nothing from the second century after Christ. And when the original building was completed, the ancient builders had filled in around its foundations; but again this fill showed miscellaneous debris from the first century but nothing from the second. The inference was therefore unavoidable that the odeion of Corinth, in spite of the account of Philostratos, was built in the course of the first century and not in the Antonine period. Philostratos' statement could only be interpreted to mean that Herodes Atticus had beautified or remodelled the theatre; and careful observation showed that there had in truth been an

elaborate reconstruction during the latter half of the second century, in the course of which the main exterior and most of the interior had been coated with marble slabs and the stage building had been decorated with a magnificent (and probably tasteless) façade. This sumptuously elegant condition barely outlasted its generous donor's span of life, being shortly afterward attacked by a fire which was violent enough to calcine the marble and reduce all its splendor to nothing. An apparently reliable statement in an ancient author was thus proven inaccurate and the true history of the odeion at Corinth recovered by the simple archaeological precept of watching the soil before it was removed to the dump.

A couple of years ago the American School, still working at Corinth, cleared the site of a sanctuary of Asklepios scantily mentioned in that ancient Baedeker's guidebook for Roman travelers which the antiquary Pausanias compiled and published under the title *A Description of Greece*. Apt to be chary of information, Pausanias outdoes himself in his description of the Asklepios sanctuary at Corinth. "Near the gymnasium [he says] there are temples of Zeus and of Asklepios. The statues of Asklepios and Hygieia are of marble, that of Zeus is of bronze." As there is no other mention of the place in surviving classical literature, that, except for archaeology, is all that we should ever have known about it.

Excavation showed that the entire site had been systematically destroyed and almost every stone removed. The early Christians seem to have been

most cordial and outspoken in their disapproval of the pagan divinity's un-Christian science of health and healing. They accused him of working by the aid of demons, and made it a matter of religious principle to destroy every vestige of his little temple and the surrounding colonnade where the pious but pagan patients used to suspend their thank-offerings for the cures accomplished or expected. Only the foundation cuttings in the bed-rock of the low flat hilltop betrayed the temple's size and plan and the general layout of the sanctuary. Yet, as though out of respect for a Roman name or the needs of the modern antiquarians, a single block of the superstructure was left reposing on the ground in front of the temple and on this block was a painted dedication bearing the still decipherable name of the great Marc Antony. It was not, however, he himself who had dedicated the temple, but two freedmen of his, who were doubtless important figures in the Italian colony of Laus Julia which had taken the place of the destroyed Greek city of Corinth.

Surely, no one could desire a better dating of the Asklepios temple. But the modern archaeologist is wary, and he soon saw that the dedication inscribed by Marc Antony's freedmen was painted on a top layer of stucco which lay, several coats thick, upon the stone architrave. And the accident that both architrave and Doric frieze above it had been carved out of the same block, coupled with a knowledge of that rather subtle and deceptive thing, the stylistic evolution of the Doric order, told him that the block

was older than the inscription and belonged to a Greek temple of the fourth century before Christ, which the Romans had merely restored and rededicated. There was apparently no further vestige, Greek or Roman. But the excavator has not finished his task until he has everywhere penetrated to hardpan or bed-rock; and the excavation accordingly proceeded undismayed by the fact that the sanctuary stood on solid rock and most of that rock had already been laid bare, with brush and broom supplementing pick, shovel, and knife.

In the rock were circular cuttings which were the shafts of deep wells, and at the bottom of the wells was a strange collection of life-size terracotta arms and legs, feet and hands, heads, chests, breasts, eyes, ears, parts of the body mentionable and unmentionable, broken into fragments but capable of being sorted and assembled. And elsewhere, close to the little headland of rock on which the temple stood, almost every dip and hollow in the ground yielded similar terracotta ex-votos of the ancient patrons of the Asklepieion. With them were found hundreds of miniature vases, two or three inches high, and fragments of other datable Corinthian ware, from all of which it could be proved that these strange refuse-heaps must date from the hundred and fifty years between the end of the sixth century and the middle of the fourth century before Christ.

The history of the sanctuary was accordingly clear. The cult of the healing god Asklepios had been introduced to the site about the year 500 B.C. This was a

time of only moderate prosperity for Corinth, marking a considerable decline from the great period of the tyrants, when Corinthian trade had been powerful from Rhodes to Sicily and the Attic potters had not yet driven their Corinthian competitors from the western market. About the middle of the fourth century this lull in Corinthian prosperity was ended by a new period of wealth and political greatness. It was at this time that the little old-fashioned and inadequate shrine of Asklepios was dismantled, and all the accumulated terracotta ex-votos from patients and pilgrims were thrown out. The site was swept clean and a new and better temple built. After 200 years this second sanctuary was destroyed when the Roman consul Mummius sacked and razed the city in the very same year with that other (no greater nor more pitiless, but more world-famous) destruction of a Roman enemy, Carthage. For a century Corinth lay ruined and deserted. Then life returned, Laus Julia was founded, the town expanded into a flourishing community, the two freedmen of Marc Antony restored and re-dedicated the Hellenistic temple. But after another lapse of time, when the Roman Empire was already tottering, the town was once more in ruins. Alaric the Goth had captured and sacked it. The community which thereafter rebuilt it for the last time as an important city owed earthly allegiance to the emperor at Byzantium and spiritual allegiance to the god of the Christians, who would not traffic with Asklepios. What the Goths may have spared, the Christians dismantled and destroyed, leaving no

trace above ground. But deep in the wells and hollow pockets of the rock lay unnoticed and unknown the strange sweepings from the early classical shrine, the mass of broken terracotta limbs which gives us our first insight into that art of sculpture in clay which Corinth, devoid of marble quarries, is known to have developed in antiquity and to have introduced into Sicily and Italy, where in all probability the Etruscans learned and adopted it.

* * *

On the southernmost cape of Attica a ruined temple fronts the sea. Byron, like many another vandal of the eighteenth and nineteenth centuries, has carved his name in its light grey marble. Thousands of tourists visit Sunium, and many behold it with the stupid eyes of the casual wanderer or the better vision of the artist. The archaeologist, perhaps no more appreciatively, sees far more closely than either of these. He sees that the marble steps of the temple are inorganically and apparently irrationally combined with backing-blocks of poros limestone of different dimensions, into which a bedding for the steps has been cut. He sees that the marble steps are carried on separate foundations from the main mass of the temple and that these foundations are composed of miscellaneous building-blocks derived from some poros limestone structure. He sees that the poros backing-blocks to the marble steps are themselves cut as step-blocks and that their top step shows traces of having once born columns which were not the marble

columns of the extant temple. Searching, he finds piece by piece the elements of this older and earlier temple, and finds that it was a trifle smaller than the surviving marble temple and that it was never completed, since its columns were never fully fluted. He reasons that it was in course of construction toward the end of the sixth century B.C. and that therefore it was either damaged by the Persians when they captured and destroyed Athens in 480 B.C. or abandoned by its builders as a result of the greater ambitions and the new interests which were aroused in Hellas by its heroic and ultimately victorious resistance to the barbarian invader. No ancient literary source mentions the earlier temple of Sunium; but the archaeologist could all but build it up again under our eyes.

* * *

The same Persian host which presumably put an end to the building of a poros temple at Sunium moved into a practically undefended Athens, captured the Acropolis from its handful of priests and elders, and destroyed its three chief buildings — a sixth-century temple of Athena, a much larger but unfinished temple of the same goddess, with columns still surrounded by wooden scaffolding, and a monumental marble gateway which alone permitted public entrance through the heavily piled and very ancient walls around the hilltop citadel. Later, when the Persians had withdrawn, — first to the Theban plain for the winter and then, after having decisively lost the battle of Plataea, over the enormously distant route

back beyond Babylon to Susa, — the Athenians returned from Salamis and from their ships to their charred and overturned and plundered town. After they had set their houses in order and walled anew their city and its central citadel, they found leisure and ambition and money for the sacred buildings on Athena's hill. Forty years after the Persians had left Attica for ever, the Athenians dedicated a new and splendid temple, the Parthenon. Six years later, at the outbreak of the war with Sparta, the equally magnificent Propylaea were as nearly finished as they were ever destined to be. Plutarch in his *Life of Pericles* describes the brilliance and the bustle of these tremendous times. But neither Plutarch nor any other ancient writer really tells us the history of the Athenian Acropolis between the Persian and the Peloponnesian Wars. To recover that history, belongs to the archaeologist. I shall attempt to describe to you briefly how he has accomplished his task.

The foundations of the Parthenon are exposed at their western end. Earth once concealed the bed-rock and covered the foundation structure of coarser stone up to the first line of marble immediately beneath the temple's lowest step. To-day a fact which no ancient eye could have perceived is manifest to every passer-by: the foundation is not a homogeneous construction, but shows that a somewhat narrower platform had been widened with additional blocks. The inference is that an earlier foundation has been re-used and extended to accommodate a wider building. In short, here just as at Sunium there have been two

temples, and we must speak of an earlier and a later (or Periclean) Parthenon.

Equally visible to every passer-by, ancient or modern, were the drums of Doric columns included in the discarded building material used for the girdling wall of the Acropolis. An ancient fortification wall is normally constructed of specially hewn blocks, — "polygonal" in the sixth century B.C., massive "isodomic" in the fifth, lighter "ashlar" in the fourth, — and so crude a makeshift at Athens, the centre of architectural sophistication, demands some special explanation. Was it haste? Was the Persian advance imminent and was every available block of stone hurriedly moved into place as a barrier against the barbarian, and even temples dismantled for this need? The column drums in the wall were unfluted, save for a few inches at the bottom, where the flutings are fully indicated, and show the crude projecting knobs or bosses by which they were handled and swung into place; and the marble shows indisputable traces of damage by fire. This is clear evidence that the temple from which they were taken was in an unfinished state. The columns were being erected, but had not yet been fluted; the fire damage must have come from a conflagration of the wooden scaffolding surrounding the columns. The temple must therefore have been fired by the Persians, and the drums dismounted and rolled into place in the wall by the Athenians after the Persians had departed. At that time there could not have been any need for frantic hurry. Now just beneath the stretch of the

Acropolis fortifications in which these drums and certain other discarded building blocks had been included, there was situated, in the city beneath, the new market-place or open public square of Athens. Whenever they glanced up to the citadel above them, the citizens of the town would have seen these strange and striking reminders of the Persian danger. Fourth-century tradition tells us that at the battlefield of Plataea the assembled Greeks vowed never to rebuild the shrines destroyed by the Persian invader, but to leave them as an eternal memorial to eastern barbarity and Hellenic triumph. Not the exigencies of haste nor the scarcity of material, but deliberate resolve of the victorious Athenians may therefore best explain the presence of these column drums in the north wall of the Acropolis.

But whence were the column drums taken? Not from the archaic Athena Temple of which I shall have occasion to speak in a moment; for their size is out of scale with that relatively small structure, some of whose proper column drums are, besides, still extant and are made of poros stone and not of marble. The derivation must then be from the only large temple site on the Acropolis, from the older Parthenon whose foundations we have detected within the wider foundation platform of the present Parthenon. Further investigation shows that in addition to these column drums there are also built into the north wall of the Acropolis several series of step-blocks: in the wall beneath the drums there are limestone, while above them there are marble, blocks. These seem to belong

with the drums; yet when they are taken into account and assigned to their proper original positions, the resultant temple is still narrower than the narrow foundations of the pre-Periclean Parthenon! And these foundations are not casual and easily made, so that such a discrepancy could be dismissed as a matter of no moment. On the contrary, the very strip of these foundations which our reconstructed old temple fails to cover extends with twenty courses of stone more than thirty feet underground to the rapidly retreating bed-rock of the Acropolis hill. It is impossible to assume that these elaborate and costly foundations had been built specifically for this narrower temple. There must have been a still older project, some great archaic limestone temple, for which a narrower but more sumptuous (because marble) project had later been substituted.*

Thus the history of the Parthenon emerges through archaeological investigation as no historian or other surviving ancient writer has recorded it. Behind the Parthenon of Pericles we see clearly in its larger outlines the temple which was in course of construction when the Persians captured and sacked Athens; and behind that, shadowy and uncertain, some great enterprise of Peisistratos or his sons, abandoned like that other great Peisistratid undertaking of the colossal temple of Zeus at the edge of the town below.

We have by no means exhausted the archaeological material of miscellaneous remnants of early structures built into the great girdle wall of defence which surrounds the Acropolis. In the south wall there are

some architrave blocks which will not fit any of the buildings on the Parthenon foundations. And when the whole surface of the Acropolis was probed and cleared in the systematic campaigns of the late nineteenth century, other details were added to these architraves and to certain triglyphs and metopes in the north wall, all of which fitted exactly to one another as parts of a single temple of archaic style and no great size. Thus there must have been another temple on the Acropolis besides the Parthenon, presumably the original cult shrine of Athena, which the Parthenon was intended to supplant; for it would be inconceivable that Athena should not have possessed from the earliest periods of architectural achievement a temple on her own hill. In fact, such a temple is clearly mentioned in a famous inscription from the end of the sixth century. But where was it located?

In 1885 Dörpfeld uncovered its traces close to the Porch of the Maidens of the Erechtheum and recovered its plan. But its history is very unexpected; for the temple turns out not to be all of uniform date but to have as nucleus or kernel an older shrine around which a colonnade was later added to make a more impressive structure. In this case, naturally, the older inner temple, since it once stood self-sufficient and alone, must originally have had its own gable roof; but when the colonnade was added, a wholly new roof must have been built over the entire structure in its augmented form. The proof that the temple actually passed through these two phases is extremely simple. In the first place, the foundations

of the inner temple differ in material and technical execution from those of the surrounding colonnade, showing that they were not of contemporary construction. Secondly, the actual architrave, frieze, cornice, and marble roof-gutter of an independent structure of the size of the inner temple, including eaves blocks with remarkable archaic carved designs of flying storks on their under sides, are among the miscellaneous blocks to which we have so frequently referred as built in the Acropolis walls or strewn about in the soil of the hilltop. Even the sculptural decoration of the gables, the little pediments at either end of the building, have been found. All these must have been dismantled when the exterior colonnade was added; so great was the change in size that only the bare walls and floor of the little older temple could be re-used for the new structure. When the Persians captured Athens, the entire edifice seems to have been destroyed.

Just here we shall be running our fingers upon the thorniest problem in Athenian topography. It is not conceivable that during the forty years between the Persian destruction and the dedication of the great new Parthenon there was no shrine of Athena on the Acropolis. We should imagine that the archaic temple must have been rebuilt at least for temporary use while the Parthenon was being constructed. But the Maidens' Porch of the Erechtheum is built squarely on top of the north colonnade of this old temple; and as this porch was erected during the Peloponnesian War, the old temple must have been

immediately dismantled again as soon as the Parthenon was finished. But in that case how do so many of its original blocks — columns, architrave, and frieze — survive in the Acropolis wall which seems certainly to have been built immediately after the Persians departed? Surely the Athenians would have used these, rather than make a whole new set (whose utter disappearance would also have to be explained). Historical and epigraphical evidence leads to further difficulties. The whole problem is so intricate and so technical that nothing would be gained by a mere re-statement, necessarily too brief to be penetrating or even very intelligible. But in a recent exhaustive study¹ of all the apparently contradictory facts and material, Dinsmoor has shown that there is a thread through the labyrinth and by strictly archaeological methods has established the history of this most baffling of temples. No part of the surrounding colonnade could have been reërected after the Persian destruction. Of the inner structure only the rear portion was rebuilt, because this alone was indispensable as containing the treasure storage rooms of the Athenian state. The Parthenon copied very exactly the essential plan of the Old Temple, by assigning its eastern portion to cult purposes and its western to serve as a close-locked treasury. As soon as the Parthenon was ready, the storerooms in the reconditioned rear half of the Old Temple were no longer needed and were allowed to disappear. A colossal new image of Athena, thirty feet high and hung with ivory and gold, fitly replaced the cruder ancient and probably

wooden image of the goddess, which the Athenians must either have buried or carried with them to the island of Salamis when they vacated their city before the advance of the Persians. How they housed it afterwards, whether under a simple canopy or in some temporary structure, until the Erechtheum was ready, we do not know; but when this building was sufficiently advanced, the old image was reëstablished there in the eastern room. Thus the Old Temple could vanish from men's eyes and shortly from their memories, and only the Parthenon and the Erechtheum dominated the Acropolis, as they still do to-day.

While the Parthenon was building, and even on the day when it was finally dedicated in a ceremony no doubt of great magnificence, the processions which ascended Athena's hill continued to climb by the same steep winding path as in the days of Hipparchos the Tyrant and must have passed through the same unimposing — though by no means unbeautiful — marble gate-house in simple temple form through which for nearly a century had passed the worshippers to Athena's shrine. Though the Persians presumably wreaked considerable damage upon it, the public entrance gate to the Acropolis could not have been left for nearly fifty years in ruins until Pericles through his architect Mnesikles finally began the splendid new gateway which we still call by its ancient name the Propylaea. It must therefore have been restored to passable condition. But as the Parthenon's columns rose, it must have grown ever more

apparent that the old gate to the Acropolis was small and out of keeping. For size and for style, the Old Temple and the Old Gate were in harmony; but the great new Parthenon demanded a new and finer approach. Scarcely was the temple finished when the new Propylaea were begun. Before six years were out, they were finished — or rather, were as nearly finished as they were destined ever to be. Archaeological investigation has made it indisputably plain that the Periclean gateway to the Acropolis involved an even more grandiose plan which was never fully carried out. The actually completed building was only half of the original project, in the sense that out of five component parts only two and a half were erected.

There is no surviving ancient record from which this information can be gleaned. It is wholly an archaeological contribution, and as such deserves to rank among the most illuminating and most interesting examples of archaeological method.

The Propylaea as seen from the Parthenon resembles a prostyle Doric temple flanked by two unequal wings attached near its further end. This central element, with two magnificent façades of Doric columns and an inner double row of slenderer Ionic columns supporting an exquisitely coffered marble ceiling, was completed. Although it is now in ruins, it shows everywhere evidence of the builders' final touch — everywhere, that is, except on the exterior of its walls, where the rough bosses beneath which the lifting-tongs were set to hoist the stones into place

have never been chiselled away. Closer inspection shows that much more than the mere final dressing of the surface has here been left unaccomplished. High up on the wall there runs a horizontal moulding which has no meaning as an exterior decoration and can only mark the level at which a ceiling should be carried. Above this there are at one point the cuttings for the long timbers of a ridgepole and near it the indications for the slope for a roof. Finally, there is an external attached pilaster which calls for a row of columns, and a prepared foundation for these columns to stand on. Yet there are equally clear indications that these preparations never led to the expected fulfilment: what was intended to be a covered and colonnaded wing fronting the Erechtheum remained the empty ell which it appears to-day.

The Propylaea were still in course of construction when the Peloponnesian War broke out. Was it the diversions and excitement and poverty of an embattled city which cut these architectural ambitions abruptly short? Perhaps. But if we consider the corresponding unfinished wing on the south, we shall find that its completion would have involved a serious trespass upon the domain of Brauronian Artemis and the destruction of a very ancient wall which defended the Acropolis in earlier times and bore testimony to its antiquity by the epithet "Pelasgian," by which it seems to have been generally known. Further, there are the two smaller wings which faced the ascent to the Acropolis, and in these an equally striking condition of affairs may be detected; for though the north

wing was finished and in use as a public hall or museum for paintings, the south wing was crippled and abbreviated to less than half the proper size. Here again the old Pelasgian wall barred the architect's advance, and again a finished building would have involved serious trespass upon a god's domain, this time upon the territory of Victory, whose altar and shrine were close at hand.

A glorious plan was thus wretchedly mutilated, partly perhaps by the outbreak of a great war, but more probably by the obstruction of the priests of the adjoining sanctuaries of Artemis and Victory. What or who lurked behind the priests — mere conservatism and piety, or personal jealousies, or political pressure from the popular party which wished to balk and overthrow the autocratic Pericles? The question takes us beyond the province of archaeology, out of the material world of architectural observation and technical inference into the speculative combinations of political history. I venture no reply to the question precisely because I am seeking to illustrate the methods german and proper to the archaeologist.

* * *

Those who go up to the Acropolis nowadays pass first through a monumental lower gateway from Roman times, situated at the foot of a long flight of modern steps which well suggest the imposing appearance of the approach in the later classical period. But when Plato or Demosthenes ascended the hill, they passed along a less pretentious way laid across

the bare rock and leading immediately beneath the high tower-like bastion on which stands the tiny Ionic temple of Athena Victory. Had they glanced up from the winding, toilsome, and probably none too smooth track, they would have seen that the exterior of the bastion above them was crowned with an exquisitely carved frieze whose marble slabs were surmounted by a railing of metal spikes as a restraint to those who idled atop of the bastion beside the little shrine of Victory.

In the course of the century during which Greece has been a free nation in our modern world, the broken fragments of this carved parapet have been slowly coming to light. In the Acropolis Museum today there are portions of most of the slabs, but mainly in such a mutilated condition that one cannot actually claim that more than about a third of the original parapet has survived. The subjects represented by the carving are consistent and uniform: winged victories decorating trophies with armor of the slain or leading cows to sacrifice or standing as attendants at the altar. Here and there a seated Athena seems to interrupt or to give point to the action.

The evident archaeological problem is to assign the fragments to their correct positions and to recover the subject-matter and scheme of composition of the whole. The elements for the solution of this problem are very diverse and furnish an ideal example of archaeological method.

The slabs of the parapet are for the most part of a standard length of about four feet, and these normal

sections do not admit a variation of more than a few inches. There were, however, corner blocks of unusual shape and size. For greater stability, the slabs were fastened to the marble coping of the bastion underneath them by metal dowels, and the cuttings for these have survived in the base of some of the parapet slabs as well as on the bastion coping wherever this has not been removed. The slight variations in the length of the slabs must be made to agree with the equally slight unevenness in the spacing of the dowel-holes in the coping. But as most of the slabs are fragmentary, so that their exact original length remains problematical, this method of calculation would be idle were it not for a second series of cuttings, this time on the top of the parapet, to receive the upright rods of the metal railing. These are very accurately spaced at about six inches apart, so that no irregularity or deviation is tolerated. Any slab or portion of a slab, if assigned to any definite position, must be able to satisfy the demands both of the railing-intervals above and the dowel-intervals beneath. Further, the rain water which gathered on the bastion behind the parapet was allowed to escape through small semi-circular cuttings in the base of some of the slabs, and there is a strong probability that these water-channels were spaced evenly and placed symmetrically, so that still another calculation must be satisfied in assigning the slabs to their positions. Still further, certain slabs can be indisputably assigned to the short section of the parapet which straddled the western steps of the little temple on the very edge of the bastion.

Such slabs have a telltale cutting in their backs where the marble has been cut away to fit over the step. Certain other slabs can be assigned to the north stretch by the technical observation that the dowelling here was employed at the opposite end of the block from that found elsewhere in the parapet. And last of all, scrutiny of the sculpture shows that six distinct artists were at work; and the observation that the work of these masters invariably groups itself as though each had contributed a distinct section of the parapet gives the final clue for assigning even the small fragments which were devoid of any technical indication of their original position. With every piece at last in place, the composition and scheme of the whole frieze emerges. Like the missing elements in the famous chemical table of atomic weights, it is now possible to prophecy the subject and style of the still missing portions of the parapet, so that any further fragments discovered in the future can be immediately set in place.

* * *

I have given half a dozen instances of archaeological investigation, in each of which there have come to light wholly new facts such as, except for archaeology, we would not and could not have known. All of the examples were drawn from the architectural field; but the derived information was more than mere technical detail about certain architectural monuments. In Corinth the date of introduction of the cult of Asklepios could be shown to be earlier than at Athens or

Epidauros; and the methodical destruction of the site by the Christians illuminated the extinction of the cult. At Athens the oldest Parthenon gave us a better gauge for the prosperity and architectural ambition of the age of the tyrants, while the strange history of the Propylaea helped us to understand the bitterness of political feeling during the dominance of Pericles and showed us that even the magnificent and costly Parthenon did not suffice the amazing architectural ambitions of an age in which a sudden accession of wealth felicitously coincided with a rapid maturing of artistic powers and national self-consciousness. Such information as archaeology here gives us ranks equal with the text of Herodotus and Thucydides as a source of knowledge for fifth-century Athens.

But just as we read these historians both for the material facts which they record and also for the imaginative pleasure of the pictures which they evoke, in fact, consider them both as history and as literature, so these archaeological discoveries can be seen to comprise both fact and fancy, objective historical data and more subjective architectural beauty. We have won not merely the history of the buildings on the Acropolis during the fifth century: we have won the buildings themselves.

There are thus at least two stages in the archaeological approach to antiquity. The first is as nearly as possible scientific, dependent on exact observation and strictly coördinated inference, an objective and impersonal attempt to combine all available material facts into a larger, more complete, but still wholly ma-

terial unity. Actual shattered and scattered fragments of the ancient world survive: given these fragments, how much of the material condition and appearance of that ancient world can be recovered? That is the self-set task which marks the first step in the archaeological approach. But beyond this purely scientific phase there looms a more shadowy and less definable one, which I can best characterise by an analogy.

Ever since the fall of Constantinople in 1453, when the living Greek tradition of Byzance was scattered and a knowledge of Greek letters was brought to Italy, European scholars have gathered, compiled, and compared the manuscripts of the ancient authors, seeking to find for each surviving book a true text. The modern world is only very mildly interested in the particular version of Plato which some late-medieval Byzantine monastery kept unread upon its cupboard shelves, but lays great store upon the real version which a certain marvellous Athenian mind created some four hundred years before the birth of Christ. To recover that earlier Plato, to find again and completely the true text, is an exercise and a discipline demanding great philological training, literary sensitiveness, familiarity with ancient and especially with Platonic ways of thought and expression, together with a sure grasp of the technical intricacies of text-transmission and text-corruption. But let us assume that at last the true and complete text of Plato has been established. We now have the book: it still remains to read it. Beyond the philologist there waits the philosopher and the esthetician.

Even more cogently in archaeology, beyond the scientist there waits the humanist. If the surviving material fragments of the ancient world have been correctly assembled and pieced together, so that by strictly logical reasoning the great deal which is missing has been inferred from the little which is extant, what final use shall we then make of this hard-won penetration into the material actualities of ancient civilisation? After all, the science of archaeology, esteemed purely as a scientific method, might equally well operate on some wholly second-rate and unimportant culture. Surely it is not mere accident that archaeology first arose as *classical* archaeology and first busied itself with the antiquities of Greece and Rome. Is this to be dismissed as an irrelevant accident? Is the humanistic value of archaeology to be ignored in the mere perfection of a scientific discipline? If that is so, then what shall it profit a man to have resurrected the body of the ancient world, if he lose its soul?

II

ARCHAEOLOGY AND HOMER

IN THE preceding lecture I gave instances of archaeological investigations in architecture and showed how by careful interrogation of a site we could deduce its architectural history and supplement our written records with wholly new and unsuspected details. We may fitly characterise this type of investigation as the archaeology of the foot-rule or the metre-stick, for it depends essentially on accurate measurements and its hypotheses are usually confirmed or refuted in the last analysis by the metric tape. It is consequently a rigorous discipline into which no one should venture who has not the patience of extreme accuracy and a certain docility of imagination which can guess the unseen from the seen, the missing from the surviving, not by a great flight of visual fancy but by a very prosaic and hard-headed determination to find the material traces from which the complete original condition can be demonstrated rather than devined. The results may be spectacular; but the process itself will be wholly uninteresting to the spectator-at-large who sees only a young man with a steel tape or a folding metre-stick clambering around, squinting and measuring and writing endless figures to adorn little sketches of broken building-blocks.

This is not, then, the archaeologist of popular imagination and the daily press, whom the Tomb of Tut-ankh-amen resuscitated in such glorious golden lineaments. The perfect archaeologist for the public is the digger who, like Little Jack Horner, never seems to put a finger in the pie without pulling out a plum, whereupon the associated press of the world finishes the jingle by celebrating his praises. Yet the present state of the practice of excavation is such that the man who insists on merely digging for treasure must be forbidden the right to dig and excluded from the field. The young excavator in process of training must be taught not to dig in order to find anything, but to dig almost as though there were nothing to find. He must slice the cake as he finds it and not try to pull out the plums.

One has only to stop for a moment's consideration to realize that to pull out the plum from the cake is to tear the jewel from its setting. Once an object is out of the earth, cleaned, and put on exhibition in a museum, it becomes sullen and refuses to answer questions. The despair of every archaeologist is the complete lack of record which surrounds more than four-fifths of the famous relics of the past. Many of the great vase collections of Europe are largely composed of so-called "Etruscan urns," Greek vases from Etruscan tombs; but if we only knew from which tombs they were taken and what other vases and objects were found in the same tomb with them, how readily we could answer many questions which now we can only ask without hope of reply!

Judging by the results of excavations in Greece and in most Mediterranean lands, it is fair to say that at least nine-tenths of the material which the spade turns up to-day is less important for itself (I mean, for its own intrinsic rarity or beauty or appeal) than for the company it keeps. I should like to cite you a recent instance which might claim to become a *locus classicus* in our science.

In the sanctuary of Olympia, where the greatest athletic games of the ancient world were held, there are the considerable and extremely interesting remains of a temple of Hera, which ranks among the oldest buildings of the classical Greeks. Its date is not obvious; but it possesses marks of undeniable antiquity. The wall had a socle or base of stone, but was otherwise of sun-baked brick. Most of the superstructure seems to have been of timber and terracotta. Judging by such fully stone structures as the Apollo temple at Corinth and other available evidence, such an architectural tradition as characterises this temple of Hera at Olympia can scarcely be imagined later than 600 B.C. The site was dug and the temple platform cleaned some fifty years ago in the course of the great German excavations of Olympia. But since that time, experience has repeatedly shown that there are nearly always traces of still earlier structures in or under the buildings of more classical date. The veteran of architectural archaeology, Professor Dörpfeld, decided to sound the Heraion for similar evidence. And quite as he anticipated, he found evidence of an earlier and simpler

shrine beneath the surviving one. And beneath this, though the material does not seem to me either abundant or unambiguous, it seemed that there were traces of a still earlier state. Underneath everything, where it could not have fallen or rolled or sunk, but where it must have been when the earliest shrine was built, was a little painted earthenware jar of the sort which archaeologists call proto-Corinthian. In itself it was not great treasure, and I doubt if any museum would normally have given it shelf-room. But had that little pot not been found where it was by a competent and trusted investigator, we might still be arguing and guessing about the date of the temple of Hera. With perfect justification we might have reasoned that, admitting that the surviving temple could not have been built *later* than 600 B.C., it might well have been much earlier; for the stone columns of this temple are of every possible period from the sixth century before to the second century after Christ, and this condition can only be explained on the assumption that the original supports were of wood, made of the trunks of trees, for which, as one by one they decayed and became insecure, columns of stone were substituted. Owing to this unique and curious but incontestable fact, the investigator who wishes to maintain the high antiquity of the temple could argue that, if any of the wooden columns survived until after the birth of Christ (and the traveler Pausanias records seeing one of these wooden columns at the time of his visit in the latter part of the second century of our era!), and if the earliest stone substitute is

unmistakably of the type prevalent in the late sixth century B.C., then the original wooden colonnade must necessarily have been standing at least a century or so before any of its columns needed to be replaced. And if on this reasoning the present Heraion goes back to the eighth century B.C. and an older shrine preceded it, and a still older structure preceded this, we may reasonably insist that the year 1000 B.C. is a late and conservative estimate for the earliest architectural period here discernible. But underneath everything lay imbedded the tiny proto-Corinthian pot.

Dörpfeld, the great master of inductive reasoning in archaeology, would be the last to deny the conclusive finality of this evidence. Wholly convinced of the great antiquity of Greek architecture and Greek art, he has boldly met the difficulty by claiming proto-Corinthian pottery as a product of the Phoenician period, even as of Phoenician manufacture, and undismayed has pushed the date back into the second millennium before Christ. And in consequence, an enormous heresy in chronology, which would force us to rewrite the whole early history of Greece, may be made to hinge momentarily upon the little pot in the deepest level of the Heraion at Olympia.

But how shall we determine the date of the little proto-Corinthian pot? By turning our backs on Olympia and sailing across the Ionian Sea to Sicily. There in the graves of the more ancient Greek cities such ware has been found in comparative abundance. In the graves of Selinus, a town which was founded

around the year 628 B.C., there is no proto-Corinthian (though plenty of other Corinthian) ware; whereas in the graves of Syracuse, a town which was founded almost precisely a century earlier, the proto-Corinthian is found in its most primitive as well as in its developed form. At Gela, founded early in the seventh century, the most primitive shapes and decorative designs do not occur; but the fully developed proto-Corinthian exists. In the face of this evidence, it is hard to see how one can doubt the conclusion that the type of proto-Corinthian which was found in the lowest level of the Hera temple at Olympia belongs to the early seventh century.

Similarly at Corinth itself, where all the pots were manufactured, the excavations of the American School have confirmed this reasoning. Proto-Corinthian ware is never found in graves with geometric pottery, while in the ruins of the potters' quarters it is found in deposits and pockets under the remnants of the flourishing period for which we use the convenient epithet of "Orientalizing"; therefore the proto-Corinthian period preceded the Orientalizing and succeeded the geometric. This is only a relative chronology; but there is perfect mandatory proof that the Orientalizing period cannot fall much earlier than 600 B.C., while there is a huge body of evidence which does not allow pushing the end of the geometric period very much back of 700 B.C. And so the proto-Corinthian period can only fall in the seventh century B.C., and with it the earliest level of the Hera Temple is dated in that same century. The surviving

temple, so famous in architectural handbooks of to-day, becomes a product of the Orientalizing period of the end of that same century which brought not merely to Olympia but to the whole of Greece the full wave of renaissance from the darkness into which the eastern Aegean was plunged after the collapse of the Cretan and Mycenaean civilisations.

What then of Dörpfeld's Phoenicians? The great German archaeologist did not invent them. He inherited them from the days of his youth, when every Aegean isle and every cave and anchorage from Cyprus to Cadiz was haunted by traders from Sidon and Tyre. "Haunted," I say purposely; for they were only ghosts. Movers' book on the Phoenicians, Victor Berard's *The Phoenicians and the Odyssey*, are landmarks in this Semitic invasion. The French have coined a phrase for this illusion — "the Phoenician mirage," *le mirage phénicien*. Let me picture for you the ancient Mediterranean when this mirage hung over it. Out of Sidon, the great maritime capital of the Palestinian coast, the Phoenician merchant fleet sets sail, loaded with beads and jewels, Egyptian scarabs and fayence figurines, engraved silver bowls, gold armbands and necklaces, rich woven fabrics dyed in regal purple, hangings, tapestries, and embroideries. These are the ships of Tarshish, bound for Tunisia, Malta, Sardinia, the straits of Gibraltar, and through the straits into the great Atlantic surge washing the Phoenician colony of Gades, near the silver city of Tartessos, whose wealth is all the ore from the mines of central and southern Spain. These

are the great navigators of antiquity, unafraid to brave the Atlantic tides, to double the cape of Portugal and sail to Brittany and Britain for tin, or turning south along the coast of Morocco to reach the Canary Isles or bring back apes and ivory from the Gold Coast of west Africa.

Mirage! mirage! hopeless illusion!

At Thebes, according to legend, dwelt Cadmus the Phoenician. Throughout classical times, the central hill-top of Thebes was called the palace of Cadmus. When the site was excavated a few years ago, a palace emerged; but it was Mycenaean and not Phoenician. Cadmus was fabled to have introduced the alphabet into Greece, and the expression "letters of Cadmus" was tantamount to the earliest Greek alphabet, so manifestly derived from the Phoenician. In the palace on the Theban hill, the excavators discovered storerooms with earthenware jars on which were painted strange symbols. The "letters of Cadmus," one would think! But the symbols were not Phoenician letters and bore not the slightest resemblance to Semitic writings.

From Thebes, according to Greek tradition, Cadmus colonised Thera, a volcanic island in the Aegean Sea. On Thera, the site of an ancient city was excavated by German archaeologists, who found that a volcanic eruption had destroyed and buried an old civilisation and that a later city had flourished and decayed above this level of destruction. But the older civilisation was of normal native Aegean type without Semitic elements, and the later city was

Greek. Strange old inscriptions were found carved on the bed-rock close at hand; but though the letters were of such archaic form that they resembled the Phoenician script of the eighth century B.C., they were good Greek letters, spelling only good Greek words. There were no Phoenician remains.

Elsewhere in the Aegean, the Phoenicians were thought to have had their stations, having come for the much-prized shell-fish, *murex* and *purpura*, from which they boiled their famous Tyrian purple dye. But though the empty shell of the purple-fish may be found on Aegean shores, there is nothing to show that it was Phoenicians rather than Greeks who had caught them. Nowhere in Greek waters has antiquarian or archaeologist found the least trace of a Phoenician settlement.

Sicily, it was thought, was held by the Phoenicians before the first Greek colonists settled on its shores. Yet the Sicilian sites have been pretty well explored and some of them have been systematically dug, and many of them have been ransacked for antiquities. The result has always been the same. On the site of Greek towns in the east of the island, native Sikel ware can often be found in the earliest graves; but there is no Phoenician level or stratum or period. In the west of the island, at the point which Carthage held, the finds are Punic, which is late-Phoenician or west-Phoenician, as one may choose to call it. But there is no early level dating back into the ninth, or tenth, or eleventh, or twelfth centuries B.C. to bear witness to a great Phoenician Age.

In Spain the story is the same. At least, ten years ago when I had occasion² to sift and examine the evidence, I could not find that the south-coast stations from New Carthage over Malaga to Cadiz had yielded anything earlier than Carthaginian Punic. No one doubts that there was a Carthaginian empire in Spain, an empire that caused the Romans a great deal of envy and concern; but behind or beneath the Punic empire should be a Phoenician one, dependent not on Carthage but on Sidon and Tyre. And so far as the sparse and unsatisfactory excavations in Spain have brought any evidence, this Phoenician period is not to be found.

"Must it have left any traces?" the reader will say. "Perhaps the Phoenician things have not yet been found — by chance or by lack of proper search they have escaped the excavator." But the years go by, and the Mediterranean is being searched ever more fully and more systematically; and still there are no Phoenicians! Ancient records are ever more closely scrutinised and more closely correlated by the historian, and new records are being added to those already known; yet nowhere does it appear that the greatness of Tyre and Sidon belongs to the second millenium B.C. That Phoenicia from very early times traded with Egypt is apparent; that she knew Ionia in the eighth century and founded colonies on the Tunisian coast at that period, or a little earlier, must be conceded. But for the claim that there was ever a time when Phoenicia was the mistress of the Mediterranean, held the Aegean and colonised Greece, not a shred of evidence can be adduced.

On the contrary, there is good and sufficient evidence against such a view. We now know that the Greeks spread out over the Aegean during the final centuries of the second millennium B.C., reaching the Asia Minor coastland and its adjacent islands. Yet they adopted no Phoenician nautical terms, as they seemingly would have done had they come into contact with a Phoenician thalassocracy. The few Phoenician words which occur in the Greek vocabulary are mainly names for metal, woven goods, and perfumes, and none of these is demonstrably older in Greece than the seventh century B.C. The objects which they denote cannot be traced farther back than 700 B.C. on Greek soil.³ The same observation applies to material objects more unmistakably Phoenician. Whatever un-Greek, imported Phoenician objects have been found in Greece do not occur in an earlier environment than the late geometric of the closing years of the eighth century. The archaeological records, to be sure, are very faulty, and future excavations may yield a different story; but for what it is worth, the evidence is consistent and emphatic. Elsewhere the story is the same. On the theory of a great early Phoenician expansion, Cyprus should have been a Phoenician and not a Greek island. That the eastward wave of Greek expansion reached Cyprus at a very early date is attested by the striking fact that the ancient Greek dialect of Cyprus was akin to the Arcadian; for the phenomenon can only be explained by assuming that the Greeks who reached Cyprus lived originally in the Peloponese in contact with the

Arcadians and were expelled seaward by the Dorians who overran Lacedaemon and substituted their own dialect for the Achaean-Arcadian. In Cyprus an unmistakable decline in foreign influences and connections marked the close of the second millennium B.C.; and this event probably synchronises with the arrival of the Greeks with their undeveloped art and cruder civilisation. But this is precisely the period when Cyprus should have shone with the full glory of the Phoenician ascendancy. On the contrary, it is the eighth century which is noteworthy for a great wave of Oriental influence, markedly Assyrian in character, but very probably transmitted by the Phoenicians, since the Assyrians had no ships. The failure of the Phoenicians to dominate Cyprus at the expense of the Greeks clearly implies that the Greeks were first on the scene. The persistence of the old Aegean linear script, in which all Greek records in Cyprus were inscribed long after the rest of the Greek world had developed its standard alphabet, strongly suggests that there were no important Phoenician settlements in Cyprus when the Greeks first reached that island. Otherwise we should expect them to have exchanged this clumsy syllabary for the more practical Semitic alphabet. But through use of this script for so many generations before they came into touch with the Phoenician alphabet and its Greek derivative, they were able to resist the temptation to change. Somewhat in the same way the Japanese learned to write from the Chinese so long before the European alphabet came to their island that the sanction of the ages

made them proof against the simplicity and superiority of our alphabet. Or an even better parallel may be drawn from the obstinate resistance of the Turks, who only recently have agreed to accept the Latin alphabet, which can be adapted quite perfectly to their phonetic needs, and to discard the traditional Arabic, which was thoroughly unsuited to their language.

Or let us leave Cyprus and turn to the west. For Sicily the evidence and the argument are the same. The Phoenicians failed to dominate that island as they scarcely would have done had they reached it many centuries before the Greeks. On the contrary if the Greeks, beginning in the second half of the eighth century, could spread a net of colonies along the east coast of the island and establish themselves as far west as Himera, Selinus, and Segesta, this is clear evidence that there were no Phoenician settlements already there to oppose them. For to maintain that the Phoenician everywhere withdrew before the Greek, like frost before the sun, forsaking his colonies and trading-posts at the first sight of an Hellenic sail, is to argue without the warrant of history or archaeology or ordinary probability. In the extreme west of Sicily the Punic settlements maintained themselves against the Greek encroachment and made no offer to withdraw. Greece colonised Sicily from the east, Carthage from the west. The two waves did not meet in the middle of the island because the Carthaginian wave was weaker and slower — and later.

The Greeks made no effort to colonise Sardinia — in spite of the advice of one of their wise men. On the

Phoenician hypothesis, Sardinia should then be out-and-out Phoenician, since here there was no Greek advance to wipe away the Semitic traces. Yet nothing Phoenician or Punic has yet been found in Sardinia earlier than the seventh century B.C.

In Etruria there have been found Phoenician objects in the tombs, but they belong at earliest to the eighth century B.C. and indicate only that the contact between Etruscan and Phoenician immediately preceded the coming of the Greek traders. The earliest ascertainable date for a Phoenician importation into Etruria is a fayence vase found in a tomb at Corneto. It bore the hieroglyphic cartouche of the Pharaoh Bokenrenf, whom the Greeks called Bocchoris and who ruled on the throne of Egypt between 720 and 715 B.C. The memory of so undistinguished a ruler would scarcely have survived his death, and hence the vase must have been manufactured during his lifetime and probably reached Etruria before the eighth century was out. Similarly, a tomb at Praeneste yielded an inscribed Phoenician bowl; but in the same tomb were Greek proto-Corinthian vases, so that the bowl could scarcely have been older than 700 B.C.

Everywhere the evidence is the same: great activity toward the close of the eighth century B.C., — in Cyprus, in Sicily, North Africa, Etruria, — and not a vestige of evidence for any earlier date. The Phoenician mirage is thus most aptly named. The wanderer in the desert who glimpses palm trees of an oasis mockingly on the horizon sees a perfectly genuine oasis but believes it to be elsewhere than it really

is. So in the desert of pre-history the Phoenician expansion of the eighth century B.C. is projected by a trick of fancy into the preceding centuries. The Phoenicians whom we see combing the Mediterranean in the second millennium are real Phoenicians, but they are in actuality sailing through the years just previous to 700 B.C.

But Homer already knew the Phoenicians! Eumaeus, the swineherd of Odysseus, claimed that he was a king's son kidnapped by Phoenician traders:

Rascals, countless trinkets high in their black ship bringing.

And when the funeral games for Patroklos are held, Achilles sets a silver bowl for prize:

Six measures it held, in beauty most excelling all the world over, since craftsmen of Sidon well wrought it, and over the misty deep the Phoenicians brought it.

There are half a dozen similar references scattered through *Iliad* and *Odyssey*.

But what is the date of these passages in Homer? Much of the *Odyssey* is full of the spirit of adventure over foreign seas and gives us hints of Greek voyaging westward to Sicily and Italy and eastward to the Black Sea. And since the Greeks are on record as having first made such journeys of discovery in the eighth century, the corresponding passages in the *Odyssey* should not be earlier. Those who have most genuine right to an opinion believe that the Homeric references to the Phoenicians are no older than the

archaeological discoveries, and prove only that there was Phoenician trade with Greece during the second half of the eighth century B.C.

Here, however, we must pause for an apparently telling argument in rebuttal. Homer calls the Phoenicians indifferently *Phoinikes* or Sidonians; but he makes no mention of Tyre. Yet the greatness of Sidon is much earlier than the eighth century, by which time Tyre has taken its place as the leading city of Phoenicia, with Sidon subordinate to it. Hence the Homeric reference is to much earlier times. An eighth- or seventh-century author should talk about the Tyrians and not about the Sidonians at all.

The argument is striking, but proves to be wholly fallacious. For even after Sidon ceased to be the chief city and was ruled by Tyre, the kings of Tyre styled themselves officially as "kings of the Sidonians"; and it is clear from extant inscriptions that the epithet "Sidonian" was the one which the entire Phoenician nation used of itself and which was applied to it also by the Assyrians, by the Hebrews, and (as here in Homer) by the early Greeks. If then the Phoenicians called themselves Sidonians, it would have taken better Semitic scholars than the Homeric rhapsodes to have discovered that many of them actually hailed from Tyre. The epithet "Tyrian," as in "Tyrian purple," is of much later date. In the eighth and seventh centuries therefore the Phoenician traders were correctly called Sidonians. The puzzle is rather how the Greeks came to call them also Phoenicians, a word which the Semites themselves did not know;

but this is fortunately a question irrelevant to our present issue.

There remains a line of last defense for those who believe in the Phoenician mirage — the "letters of Cadmus," the alphabet.

No competent scholar has the right to doubt that the Greek alphabet was derived from a Semitic source. The order of the letters in the alphabet is the same in Greek and in Phoenician; but no one can make any sense of this arrangement if he considers only the Greek alphabet, any more than anyone can claim that the precise sequence "ABCDEFGH," etc., has any logic other than mere inherited convention, whereas Semitic scholars have shown that from the Semitic point of view there is at least a semblance of rationality in the series. Hence the Greeks could not have arranged the letters in their order, but must have taken over an already existing sequence. Further, the names for the letters are not Greek names. "Alpha," "beta," "gamma" are as senseless in Greek as "Aye," "bee," "see" are in English. The delta of the Nile was named after the letter whose shape it resembled; the letter was not named after the Nile, and in itself means nothing in Greek. But "aleph," "beth," "gimel" are perfectly ordinary Semitic words. "Bet" is still a house in Arabic today; and all of us can penetrate through "gimel" to our own word "camel." Hence the Greeks must have taken over the names for their letters from a Semitic people who used them, since obviously the Semites could not have learned them from the Greeks, to

whom they were so much gibberish. Finally, the forms of the letters can be traced back in archaic Greek inscriptions to shapes which are very nearly identical with their Semitic counterparts, and these can in turn be traced back on Semitic soil to very much earlier times. The conclusion is inescapable that the Semitic alphabet is older than the Greek and that the Greek was directly and almost slavishly copied from it.

After all, then, the Phoenicians *were* of some importance! The Phoenician mirage steals up once more above the prehistoric sky-line. How could the Greeks have learned the alphabet if the Phoenicians had not taught it to them? And it is more reasonable to suppose that in the tenth century before Christ, before the Greeks had begun to navigate any waters other than their own Aegean, the Greeks could not have sailed to Palestine to learn their letters, and hence the Phoenicians must have sailed to Greece and brought the letters thither.

I am ready to agree that the argument holds; but what right has anyone to think that the Greek alphabet is so old? The imaginary antiquity of the Greek alphabet is the final illusion conjured up by the Phoenician mirage. There is not a shred of evidence to show or even suggest that the Greek alphabet existed earlier than 700 B.C., and there is absolutely overwhelming proof that it did not.

Yet historians and archaeologists alike are unanimous in ascribing to it a much greater age. The author of the article "Alphabet" in the latest edition of

the *Encyclopædia Britannica* even speaks of the period between the fifteenth and the thirteenth centuries before Christ, in connection with the Achæan Greeks who were moving about in those shadowy times. Larfeld, the author of a standard treatise on Greek epigraphy, proves to his own satisfaction that the Phœnicians could have brought the alphabet to the Greeks only in the period between the sixteenth and the eleventh centuries B.C., then narrows this range down toward its lower limit, and finally concludes that in any case the Greek alphabet must antedate the year 1000 B.C. Even the historian Beloch, who knows that there were no Phœnician traders in Greek waters in such early times, yields to the pressure of traditional prejudice and assumes that the tenth "or possibly even the eleventh" century B.C. is the period of the alphabet's transmission from the Phœnicians to the Greeks.

This is all utterly untrue — part and parcel of the great Phœnician mirage. Between the year 900 and 750 B.C. there was not a man, woman, or child in Greece who knew anything whatever about the alphabet or about writing. The old Minoan and Mycenean scripts had died out completely. Until long after the year 800 B.C. Greece was barbarous and illiterate, without letters and without art. She had no temples and no sculpture. Earthenware vases there were; but these were decorated with such crude and infantile drawings that we must go back into predynastic Egypt or among uncivilised desert tribes to find anything so rudimentary and so helpless. Somewhere

in the course of the eighth century there came an awakening — not from within but from without (as most awakenings still come to-day). A more civilised world knocked at the Aegean door and woke the sleeper from his slumber of a quarter of a thousand years.

In a recent very beautifully written article on Dionysos, the German archaeologist Langlotz has sketched this awakening in vivid terms. For him it is the coming of the Oriental cult of Dionysos, with its revelry and stirring ritual, which moves like a wind across the sleeping Aegean. Men (he seems to reason) who for several generations have done nothing must be violently stirred before they will spring to action, build great temples of brick and stone, carve statues of limestone, cast figures of bronze, paint friezes of animals on every little pot or jar for daily household use. A new religion can startle men's minds awake, and the new religion of Dionysos demonstrably came out of the Orient just at this period of the great awakening in Greece. Hence, reasons Langlotz, this coming of the Dionysiac rites must have been the prime moving source: Dionysos is the god who wakens Greece from slumber, as in the legend he wakes the sleeping Ariadne, who might symbolise the old Minoan civilisation long since dropped into dreams.

To me, Dionysos is merely a symbol or symptom of the awakening force. Men have nearly always the kind of religion that they are ready for and that they deserve. In the eighth century B.C. the outside world of Babylon, Assyria, and Egypt, where the civilisa-

tion of the western world began, had once more touched Ionia and Greece; and it was this contact which ended her barbarism. Far to the east, even Cyprus had been sleeping. In the eighth century, as we have already mentioned, a great wave of Oriental influence, markedly Assyrian in character, swept over that island, transmitted presumably by the Phoenicians, since the Assyrians had no ships of their own. It is this same Oriental wave which washed as far as Ionia and finally spent its force in the Aegean, only barely reaching the hither shore of distant mainland Greece.

Here at last were the Phoenicians, here were the Sidonians of the Iliad and the Odyssey, bringing their trinkets and their woven fabrics to revolutionise Greek design and convert it from mere abstract geometrical pattern and crude silhouettes of birds and humans, opening its eyes to a whole new world of entrancing forms—lions and sphinxes and sirens, cocks and hens, mermen and mermaids, all the mystery and fantasy of the East. Here were new thoughts and new traditions: tales of the great temples of Egypt which the Sidonians had seen, and the fabulous wealth and glory of the Assyrian palaces to which the Sidonians had supplied their ivory carvings and their silver bowls, their woven tapestries and their hangings dyed to glowing purple. These were the Sidonians who had sailed to that western colony which their own greatest city, Tyre, had founded, "Newtown," *Qart-hadasht*, which the Romans were to mispronounce "Carthago" and we "Carthage."

These navigators of the great sea could tell of North Africa and the lands beyond the place where the sun is seen setting. What wonder that their Greek listeners were agog to sail westward and see for themselves the marvels of those unsuspected shores. When at last they put forth, they did not travel past Egypt and along the Libyan coast, as the Phoenicians usually did, but westward along their own shores, and so discovered not Tunisia but Italy.

We may perhaps deduce from the Semitic words adopted by the Greeks — dangerous as such philological speculation is now known to be — that the Phoenicians introduced to Greece from Egypt the knowledge of linen and the custom of wearing an undergarment of that fine material beneath the heavier wrap of woolen cloth. Much else they must have given or suggested to the Greeks while selling them their woven goods and metal ware. But the most momentous novelty, the finest of all Phoenician products, they gave away for nothing in exchange: the marvellous, the miraculous art of writing.

In a lecture⁴ which I have agreed to deliver elsewhere and which I cannot well anticipate here, I am setting forth a detailed argument that the Greeks learned their alphabet as late as the year 700 B.C. Such a view is at the present moment heretical; but I am confident that it will soon be quite respectably orthodox. It is only through force of tradition and habit that anyone to-day believes that the Greek alphabet is older. Everyone who is competent to gather and examine the evidence, need only take the

trouble to gather and examine it without prejudice or presuppositions in order to see that the proof is so perfectly conclusive and the deduction so obvious that he, like myself, will only wonder why anyone could ever have held any other idea.

Though I cannot here set forth the entire situation, I hope that it may be of interest to summarise some of the substance of the argument.

Briefly, no Greek inscriptions older than the seventh century B.C. have ever been discovered. Of course, one may be announced in to-morrow morning's paper, and breakfast-time may undo to-night's theory; but the western world has been interested in collecting and recording Greek inscriptions for nearly five hundred years, and the fact that there are now known a great many sixth-century inscriptions, a considerable number of seventh-century inscriptions, but absolutely not a single eighth-century inscription can scarcely fail to be significant. Early sites have been excavated; pottery, metal-ware, and stone from eighth-century strata have been turned up: neither potsherd nor bronze nor stone has ever had so much as a single letter upon it.

Greek literature has a curious kink or break in its history. Melic poetry, the poetry of personal self-expression and of the brief epigram, begins suddenly in the second half of the seventh century. All the earlier literature *which has survived* is of wholly different cast — diffuse impersonal narrative celebrating remote heroes of other times. If we believe in the early date of Hesiod, we shall have to add a cumber-

some treatise on mythology and a farmer's almanac in epic verse. Besides the Iliad and the Odyssey, we have fragmentary quotations from other but apparently essentially similar heroic narratives, as well as brief prose references and *resumés* of their contents. All this heroic epic poetry was, according to unanimous Greek tradition, composed and transmitted by professional bards or reciters. The extreme contrast between this earlier poetry and the later lyrics and epigrams ceases to present any problem if we assume that the literature of the epic period depended wholly upon oral instead of written transmission, so that all briefer and less professional songs and verses were forgotten and lost because there was no means for preserving them by writing them down. On the other hand, the adoption of paper and pen in the early seventh century B.C. rescued from oblivion productions in hitherto ephemeral forms and stimulated them into literary self-consciousness and activity. It is cheerless work to write if you have no public; and the imaginary public which the mere printing of a book creates in the author's mind is his greatest incentive to write.

On this supposition, the two-lined epigram was invented to meet the needs of those who now saw the possibility of inscribing their dedications at the sanctuaries and their memorials — in short, people who could write, but not write much. A typewriter and a linotype encourage a garrulous style; but he who scratches with difficulty his unruly characters upon earthenware or limestone or marble must be brief.

The monumental style is the style of those who have not many letters to waste; and that is why the brief and trenchant two-line epigram arose in the seventh century. The repetitions, the mnemonic tags, the lengthy spoken style were all easy and appropriate to the rhapsodes; but they could not survive the pressure toward brevity and condensation which the new medium of writing imposed. With the introduction of writing the epic tradition must expire: "*Ceci tuera cela!*" Before a hundred years were out, the epic was so nearly dead that there was patent danger lest it become utterly extinct. But I can see the despair of the early wielders of the pen at the very thought of writing out word for word the endless recitals of the rhapsodes! What rolls of papyrus, what buckets of ink, what hundreds of thousands of little characters! Such things are not made to be written! Only a great effort could save the epic poetry from gradual lapse into oblivion. It may be that when the Phoenicians brought the letters of the alphabet, they brought no paper to go with them. The first writing may very well have been an art of scratching and engraving on hard materials or painting with wet glaze upon the unbaked pottery ready for the kiln. It may be that the Greeks had to wait until they themselves began trading in the Nile delta in the course of the seventh century before they learned how to cut the papyrus "bullrushes" into strips and lay these across one another to make writing-paper. These things are not yet clear to us; but it is reasonable to think that by the early sixth century the use of writing had become

so widespread and so familiar that it was no longer a desperate enterprise to undertake to write down all the thousands of verses which the rhapsodes had kept stored in their brains. Laboriously to patient dictation and with tireless forming of every word out of its component letters, the *Iliad* and the *Odyssey* were set down. Reasonably good ancient tradition asserts that this act was performed at Athens and during the rule of Peisistratos, hence about 560 B.C. Although such a date falls more than a hundred years after the first introduction of writing, I have tried to indicate that this is not an unreasonable lapse of time. The vast majority of Homeric scholars treat this tradition of the Peisistratid recension of Homer with ridicule. There is actually no reason why it should not be fundamentally correct. It may perfectly well be literally exact.

No written literature earlier than 650, no inscriptions and no writing earlier than 700, no contact between Greeks and Phoenicians earlier than 750 B.C.: such is the picture which I believe to be historically and archaeologically true. The chronological schedule for epigraphy and literature is simple and straightforward. The Greeks learned of the Semitic alphabet during the second half of the eighth century and adapted it to the use of recording their own tongue somewhere about or very shortly after 700 B.C., when they began to practise it for carving names on rocks and walls, for painting names and brief dedications on vases with the brush before the vases were fired or scratching them in afterwards with a sharp point of metal or stone. Probably they also employed writing

for keeping accounts and brief records of formal transactions. When papyrus and pen and ink began to be imported from Egypt in the seventh century, particularly by the Ionian Greeks, who were in more frequent trade relation with the delta, writing suddenly became a branch of literature, and under this new pressure poems became brief, poignant, pointed. Long years were to pass before literature could again become as diffuse, as decentralised, as copious as it was in the days of the rhapsodes before everything had to be written down.

These are not mere suppositions. Archaeology comes to the issue with the decisive and final word. Until fairly recently we possessed no ancient Semitic inscriptions, and even to-day they are distressingly few and rare. But by good luck some of those which we possess can be dated with precision, and among these few are precisely those which show a state of the alphabet almost identical with that of our earliest Greek inscriptions. From the seventh century on, Phoenician writings show forms for M and S from which the Greek shapes for those letters could not possibly have been derived. Hence the transmission from Phoenician to Greek must have occurred before the seventh century. A famous document, the inscribed stone of Mesha, king of Moab, can be exactly dated to the mid-ninth century B.C. This is quoted in nearly all handbooks of Greek epigraphy as the most immediate ancestor of the Greek alphabet; but it is nothing of the kind. Some of the letter forms, such as the K and the T, are so archaic that they

could not have inspired their Greek counterparts. But a surprisingly Greek-looking alphabet, of exactly the type which must be assumed for the Semitic ancestor of the earliest Greek inscriptions (such as those of Thera or the earliest Corinthian pottery bearing legends) occurs on the fragments of a bronze Phoenician bowl found in Cyprus and on some of the carved slabs of the North Syrian fortress of Senjirli, whose language is the Semitic variety known as Aramaic, but whose letter-forms are almost identical with the contemporary Phoenician. Thanks to express mention of Tiglath-Pileser (III) of Assyria, the Senjirli inscriptions can be dated to the years 732-727 B.C.; and the Cyprus bowl can be dated to the same period, thanks to its mention of Hiram, king of the Sidonians, and the possibility of proof that this is not the Hiram who was friend of David and Solomon, but the Hiram mentioned by the same Tiglath-Pileser III as paying tribute to him in 738 B.C. But if this is the stage in the evolution of the Semitic alphabets which most nearly approximates the most archaic Greek inscriptions, it brings complete confirmation to our previous contention that the alphabet must have been transmitted to Greece in the course of the only Phoenician contact of which archaeology can find any trace, namely this very period of the second half of the eighth century B.C. Arguments somewhat too technical for brief explanation tend to confine this period still more closely to the year 700 B.C.

Much that was previously obscure to the student of Greek literature and history now becomes plain. We

see that it is no mere accident that books and writing are nowhere mentioned in Homer or in Hesiod. We understand how it is possible for Zaleukos in 663 B.C. to have given to the South-Italian Locrians the first written laws of any community (the simple reason being that before Zaleukos the use of the alphabet was not sufficiently advanced for laws to be written down). We understand why it is that the much older laws of Lykurgos in Sparta were handed down verbally until they had become so well known and so firmly established that the Spartans, late in learning letters, never found it necessary to reduce them to written form and pretended that Lykurgos himself had expressly forbidden them to be written. We may be quite sure that if there had been any knowledge of writing in Lykurgos' day he would have seized on this obvious method of ensuring the survival of his legislation, just as did Moses, who, if he is historical at all, presumably lived at the time when his particular branch of the Semitic race first advanced to the stage of carving letters on stone. If the alphabet was introduced to mainland Greece shortly after 700 B.C., we perceive how appropriate it is that the historical records of Athens should go back only to 683 B.C. and that the written lists of the kings of Sparta and the kings of Argos should begin in almost the same decade with these lists of the Athenian archons. The great renaissance of Greece in the beginning of the seventh century B.C. is not least of all due to its emergence from the helplessness of illiteracy to the illuminated self-consciousness which writing bestows.

If we confine ourselves merely to the evidence of epigraphy, we should have to imagine the following picture of Greece. At the end of the eighth century the illumination of writing falls upon Ionia; in the seventh century it radiates upon the Aegean islands, striking Athens and Corinth and perhaps Megara and Argos upon the mainland; in the sixth century the gleam has lighted most of the shore of the Gulf of Corinth, passed northward from Euboea into Thessaly and southward from Corinth and Argos into western Arcadia and Laconia. In the fifth century there is still only dawn in Elis and Ozolian Lokris and all but darkness in much of Acarnania and Epirus, whither the rays do not fully penetrate until the end of the fourth century. Such is the history recorded by the spread of the art of writing, considered not so much as a bare acquaintance with the alphabet as a proper exploitation of the resources of literacy. But this picture agrees so completely with that derived by the historians from other sources that it is hard to resist the conclusion that the civilisation of Greece is not merely measured by the alphabet but was even directly stimulated and created by it.

Archaeology accordingly makes a profound contribution both to literary criticism and to cultural history in establishing the exact antiquity of the alphabet in Greece. It could not bring Cadmus to light by digging the site of his palace in Thebes; but it could dispel the haze and illusion of the Phoenician mirage and show that the great awakening in Greece took place as late as the end of the eighth century,

and that foremost among the causes of this awakening, along with the actual material specimens of Assyrian, Egyptian, and Phoenician objects of commerce and of art, and most startling among all the wonderful eastern ware in the holds of the Phoenician traders, was that weirdest and most magical of human arts, which catches the fleeting sounds breathed out by the human voice and fixes them forever with two and twenty little carved or painted symbols.

I have not attempted to estimate or to summarise the contribution of archaeology to the history of literature, since this would indeed be a formidable task. An archaeological commentary to Herodotos alone would be the work of years. I have chosen a single illustration from that most harassed field of literary criticism, the Homeric Question, and called upon archaeology for its contribution thereto, having for my primary interest to illustrate archaeology rather than literature. Actually, the archaeological contribution proved to be no less startling than a verdict of complete illiteracy for every Greek rhapsode or bard who flourished before the year 700 B.C. Does it really follow that Homer could neither read nor write?

To this question the archaeologist must make an evasive reply, since he cannot be expected to know who or what is intended by the name Homer. If Homer was an actual person born in Smyrna or Chios in the ninth or eighth century B.C., and stone-blind to boot, we have two very excellent reasons for maintaining that he could not read or write. But the archaeologist is not the person to decide whether the

Iliad and Odyssey were written by a single man or by a staff of collaborating minstrels. He can say with the conviction of authority that the Homeric poems were not reduced to writing before the seventh century, but he is not competent to deal with their history before that crucial moment. Yet as a consulting specialist, summoned by the philologist and the literary historian, he can offer casual contributions too important to neglect. For it is his province to scrutinise the material world described or implied in the Homeric poems and to identify it for date, place, and character. The results which he can present after such a scrutiny are rather mystifying.

Let me illustrate his findings by a parallel supposition from English literature. Imagine — and this is of course an utterly wild and impossible fancy — imagine that a careful reading of Chaucer's *Canterbury Tales* should disclose reference to architectural detail that could not be sensibly interpreted in terms of Gothic but only in terms of a classic style rather like that of Inigo Jones; that it transpired that a recent ruler of England had been a woman; and that there were veiled but unmistakable references to tobacco and the gold of the Spanish Main. Yet, all the while, the literary historians would have irrefutable proof that Geoffrey Chaucer died in or about the year 1400 A.D. What conclusion should we have to draw? Surely we should have to say either that we had been entirely mistaken about the date of Chaucer's lifetime or that some belated Elizabethan had been tampering with the text.

The world which Homer describes, quite as though it were the world in which he and his listeners were at home, is the world of Greek heroic legend, the world of the Trojan War and the peace which succeeded it. Later Greek historians, working at the apparent chronology of those shadowy and purely traditional times, came to the conclusion that the sack of Troy took place around 1184 B.C. Egyptian records from the rule of Merenptah and Ramses III bear testimony that the Aegean was in upheaval during the period around the year 1200 B.C. Excavations at a site near the Dardanelles, called by the modern Turks "The Towers" (Hissarlik) and corresponding pretty thoroughly with Homer's incidental descriptions of Troy, have revealed a fortified hilltop city with at least one flourishing period of the late second millenium B.C. Can these three disparate sources be combined into a proof that the siege of Troy is actual and historical?

The fairest answer is, No. But such a reply is too disappointing and too unpopular to be entertained. Let us see how it can be modified and still remain truthful.

There was a fortified pre-classical town in a location very nearly that imagined by the Iliad. This town, since it shows well-marked periods, must have been destroyed and rebuilt several times; and one of these destructions may perfectly well have been due to invaders from oversea. The civilisation at Troy and that discovered in the excavations of Mycenae are sufficiently similar to make it possible to establish

contemporary levels and periods, even though the true chronology is probably not as simple as most readers of Schliemann and Doerpfeld have supposed. We may confidently expect that the Cincinnati Expedition now at work at Hissarlik will give us a final and authoritative verdict on the dates and affinities of the various levels. At any rate, then, a Trojan War involving an expedition from mainland Greece and the siege and capture of a walled hill-city near the Dardanelles emerges as a wholly feasible assumption. Just as there may have been a woman as beautiful as Helen, so there may have been a skirmish as obstinate as the Trojan War. But nothing short of the actual documentary records of some literate contemporary nation can be expected to establish the fact beyond cavil and dispute. The Iliad is not such a record.

To put the matter epigrammatically, Homer knows almost nothing about the Homeric World.

Competent archaeologists such as Karo have sifted the evidence very thoroughly. They report that the archaeological background of Homer belongs to the eighth and seventh centuries before Christ. We have already seen that the references to the Phoenicians in Greek waters point to this same period. Many scholars seem to have thought that these references were proof of the antiquity of Homer; actually they are direct evidence against his antiquity, since all the passages involving such references could have been composed only after 750 B.C. But there is a vastly great deal more of pertinent material, all tending to the same conclusion.

To begin with architecture. Thanks to the excavations at Mycenae, Tiryns, and Gla on the Greek mainland and Knossos, Phaistos, Hagia Triada, Mallia, and Gournia in Crete, we know the Minoan and Helladic palaces and houses during the whole period of the second millenium B.C. When Homer speaks of

Long walls, high, fitted with stakes, a marvel to behold,

we are not impressed. What is such a palisading of wooden stakes compared with the great stone walls of Tiryns and Gla? And only exceptional towns in Homer are walled at all. As far as the archaeological evidence goes, this is the state of mainland Greece only during the low ebb of the ninth, eighth, and early seventh centuries.

Then there are references to temples which do not fit the small chapel-shrines which are our only trace of religious sanctuaries from the pre-classical times, but perfectly fit the rude beginnings of the genuine temple-building tradition of the Greeks. Karo remarks that the stone threshold of Delphi mentioned in both Iliad and Odyssey suggests the seventh-century poros temple which is the oldest building revealed by modern excavation in Apollo's sanctuary; and the "rich-wrought room of Erechtheus" at Athens to which Athena betakes herself in the Odyssey fits the earliest state of the Old Temple on the Acropolis, which again is a seventh-century structure.

When, during this seventh century, the Greeks began to build temples, they took for their plan the royal house of pre-classical times, the so-called *me-*

garon of the Mycenaean palaces. But it is not easy to see how they knew this form, since the Mycenaean palaces were in ruins and even the hilltops at Mycenae and Tiryns and elsewhere must have been covered by debris and dust enough to make the ruins illegible and invisible. The *megaron* form must, therefore, have survived by direct and continuous tradition, and the poor harried rulers of the little communities which struggled through the ninth century must still have lived in houses of the *megaron* type. Otherwise I do not see how, when the Greeks came to build the fine house which a god demanded and deserved, they could still have had in their keeping the tradition of the *megaron*, which the classical Greek temple so obviously enshrines. It is, I submit, for this reason that even the palaces in Homer, — the palace of Menelaos in Sparta, of the mythical Alkinoos in Phaiakia, — cannot be claimed as irrefutable proof of the antiquity of the Homeric poems, especially as the house-forms in Homer are otherwise of archaic classical Greek and not of prehistoric type. There are in Homer no echoes and reminiscence of earlier architectural traditions stronger than those which we must in any case assume to have been current in the late eighth and early seventh centuries when the Greeks began to build their temples.

As for the contents of these Homeric palaces, Karo finds the prototypes for the furniture in the "high, heavy, and ornate Phoenician-Asiatic" tradition of the eighth and seventh centuries, and considers that Homer here echoes the new knowledge of Oriental

luxury, the dyed hangings and woven tapestries, the carved chair-legs and bed-posts, the inlay with ivory and ebony, which adorned the Assyrian palaces of the eighth century. Penelope at her loom is weaving just those semi-Oriental fabrics which are to appear a little later in the designs on Corinthian and black-figured Attic vases. The men and women of the *Iliad* and *Odyssey* are not dressed like those of the Minoan frescoes and figurines. Their garments, down to the needles and brooches with which they are fastened, agree with archaic Greek rather than with Minoan-Mycenean tradition. They dress their hair like early Greeks. Only in their armor is there a puzzling inconsistency: most of it is archaic Greek, but some of it (notably the boar's-tooth helmet of Odysseus) is characteristically Helladic. How these traditions survived is frankly a puzzle; but their weight as archaeological proof for Homer's antiquity is nugatory in the scale against such other evidence as the knowledge of the use of iron for weapons, where the pre-classical world depended wholly upon bronze.

Finally, there is the poverty of objects of art in Homer. Perhaps they are not in place in the field-tents of the Achaeans laying siege to Troy; but the *Odyssey* gives abundant and irresistible opportunity for their introduction. Archaeology asserts that the long period between 1000 and 750 B.C. was almost devoid of art. After the contact with the East toward the close of the eighth century, largely through Phoenician mediation perhaps, Greece awoke and thereafter without break or relapse proceeded to de-

velop into the most extraordinary artistic nation of the ancient world. In the Homeric poems this awakening is at hand. The famous description of the Shield of Achilles has been compared with the designs on Cretan carved vases: it can be better visualised in terms of the mixed Oriental and legendary designs current from the time of the bronze shields from the caves of Crete to the inlaid chest of Kypselos which Pausanias saw at Olympia and described. Its date would fall most reasonably somewhere between 650 and 600 B.C., unless we assume that Homer has been dazzled by specimens of the mixed Egypto-Assyrian metal work which the Phoenicians peddled, in which case the date may be almost a hundred years earlier.

To try to force the Homeric poems into a sixth-century setting is completely contrary to all this archaeological evidence which we have just rehearsed, since Greece was a veritable hive of artistic industry after 600 B.C. But to set these poems further back than the middle of the eighth century is equally to do violence to the evidence which is overwhelmingly in favor of the period of 150 years which followed the Oriental Awakening not long before or after the year 750 B.C.

The actual world of Homer, which he cannot help reflecting because it is the world in which he lives and the only world which he knows, is thus the late eighth and the seventh century. Older songs and traditions may have been incorporated. The mere fact that the heroes of the poems are not intended to be Greeks of

this time shows that a folk-memory is at the bottom of the entire story. But the Odysseus whom Poseidon's wrath drives into the western Mediterranean is actually the Greek who in the late eighth century went trading and colonising along the shores of southern Italy to the wonderful island of Sicily with its winds and volcanoes and its now friendly, now hostile, folk. And though the Iliad sounds as though it must be much older, because it confines itself so largely to Troy itself, we have seen that even the Iliad's writer knows too little of the pre-classical world to be himself a Mycenaean. After all, no one has tried to make Aischylos a Mycenaean because he wrote the *Seven against Thebes* and set the action of so many of his plays in the world of the pre-classical heroes. Homer happens to be a narrative instead of a dramatic poet, and must therefore describe his world more intimately and more fully. But for that very reason he is all the more certain to betray himself. Far more surely than Aischylos portrays underneath the heroic guise of his characters the habits and material environment of the early fifth century, Homer reflects the Greece of two centuries before. The sixth-century vase-painters preferred for their pictures this same world of mythology and pre-classical legend; and Homer is essentially parallel, not anterior, to these. Some of the vase-designs seem to follow or illustrate Homer; but the vast majority do not. But if the pre-classical world actually survives in Homer, a tenth- or ninth-century poet, these vase designs ought to illustrate Homer as faithfully and closely as

early Armenian manuscripts illustrate the Bible and its apocryphal accretions.

We must leave to the philologist the intricate questions of the Aeolic substratum and the Ionic overlay of the epic dialect and content ourselves with saying that if the Aeolic substratum is older than 800 B.C., not very much of the surviving Homer can ever have been straight and unmixed Aeolic. But in such matters the archaeologist is not at home. In truth, I have in these lectures invaded the Homeric Question mainly in order to show the boundaries of archaeological competence and incompetence. Whenever a problem hinges on the materially actual, — the shape of a spear or a shield, the design on a woven fabric, the size of a hairpin, the construction of a grave, — it is the archaeologist's province to examine and reply. And the more highly coördinated and self-conscious the object is, the more (I mean) that it expresses an individual time and place and an individual maker, the more full and emphatic the archaeologist's verdict will ring. And thus it is that the range of objects in which mankind is most individual and most expressive through a material medium must be the archaeologist's supremely congenial field; whereby I refer, of course, to that great group of objects which we call together under the vast title, Art. To this great field it is high time to turn.

III

ARCHAEOLOGY AND ART

FROM my previous efforts to define its proper province and its congenial method, it follows that archaeology can approach art only on the more material side, and that such immaterial arts as music and literature tend to escape it. With the ponderous actualities of architecture, archaeology is completely at home. With its more spiritual aspects, since even the professional builder is not always conversant with them, the archaeologist's lack of familiarity will often pass unnoticed. It was very appropriate that I should have begun with architecture in trying to define and illustrate the archaeological method. Next, in order to mark the boundaries of his domain, I have shown you the archaeologist at grips with literature and the seemingly intangible factors of poetical criticism, where he is so constantly at a disadvantage. Between architecture and literature as the most and the least fitting fields for archaeological activity, lies the domain of the graphic and plastic arts, painting and sculpture. For the former I could choose no more brilliant example than the work of the English archaeologist Beazley in the attribution of Attic vase-paintings to their masters. During the late sixth and the early fifth centuries B.C. the craft of the Athenian potters reached its highest point; and Attic vases were

in demand from Egypt to Etruria, Gaul, and Spain. It was natural, therefore, that the potters should have marked their wares by painting the name of the factory upon them, as might Nymphenburg, Rosenthal, or such to-day. But it is not merely the fabric, the shape, and the glaze which claimed attention; for the vases often carried painted scenes which were not mere stereotyped designs but individual creations showing forth the best efforts of gifted draughtsmen. Sometimes these painters signed their names; sometimes there appeared only the name of the shop for which they worked; sometimes the vase was wholly anonymous. By perfecting a technique of analysis of the minutiae of individual style, a technique begun by such archaeologists as Hartwig some fifty years ago, Beazley has succeeded in sorting and arranging the vast array of red-figured Attic vases according to painters and even been able to order many of these painters' works in chronological succession, so that we may speak of the youthful work of Duris, the mature style of Brygos, and trace the vicissitudes of their careers, even though no other source of information exists than merely the cups and jars in the various collections of Europe and America.

Here archaeology, working on a purely material basis, breaks through the purely material: beginning with pots, it ends with persons, and displays the growth and changes of an artist's soul.

In sculpture, probably, there is even more for archaeology to do; but it is possible that here the field is more complex, the evidence more elusive, the

achievement less sure. In the first place, the majority of the surviving works of ancient sculpture are Roman copies and not Greek originals, so that a film is cast across the mirror from the outset. In the second place, there is a much greater proportion of anonymous material, not because ancient works were unsigned, but because the signature was usually on the pedestal and not on the statue. Excavated sites are full of pedestals bearing sculptors' names, but the sculpture is missing; while, on the other hand, our museums are full of statues with the pedestals missing. Nor will the statues in the museums fit the pedestals in the excavations, since they belong to wholly different series. Further, though there were such things in classical times as intelligent and compendious histories of art, and we to-day actually possess excerpts or echoes from some of them, they are not of the sort which lead easily to identification; so that we possess still another series, the names of the most famous masters. Surprisingly few of these recur among the names on the pedestals, which, in turn, show a surprisingly great number of names never mentioned in our literary sources. On the other hand, the sculptors whose names were favorites in antiquity should be the very masters whose work was most frequently copied, so that our repertoire of copies should contain them. Yet how shall we make the identification? Quintilian describes the discus-thrower of Myron in such specific terms that we cannot fail to recognise the copies of that highly individual work. Yet Lucian's description of the smiling Sosandra of

Kalamis has left us looking in vain for a replica of that, to him, loveliest of ancient figures. And if we go through our great collections with Pliny's chapters on ancient sculpture in our hands, we shall find, even in copies, less than a fiftieth of the works which he mentions.

How shall the archaeologist set order amid such confusion? As long as he approaches sculpture as the unrelated production of a host of men living during more than half a thousand years, almost nothing can be done. It is only when he brings to bear that cardinal principle of modern biological sciences, the principle that everything organic is subject to external law and evolves through an ordered sequence, the principle which too briefly we call evolution, that any rational order can be introduced into the chaos of fragments of marble, limestone, and bronze which is classical sculpture's legacy to the modern world.

It seems to have been a fundamental tenet of nineteenth-century Romanticism to believe that art was the free and unhampered expression of the human soul in whatever medium it chose to embody itself. If the landscapes of the Dutch seventeenth-century painters never occurred as the backgrounds of the Italian masters of the Cinquecento, that was because the Italian countryside was so different from the Lowlands and because Titian had a different personality to express from that of Wouwermaun or Ruysdael. It would have been as heretical as denying the freedom of speech to assert that the artist's self-expression is conditioned by his technical accomplishment and this in turn by the stage of development of

his particular time and place. And yet the graphic and plastic arts actually move through a perfectly logical and intelligible technical evolution from which it is utterly impossible for them to deviate. They can stop and stagnate; but if they go on, they can only advance along a perfectly preordained path.

A colleague of mine was interested in my assertion that the art of sculpture invariably evolved through the same stages in all countries, and put the matter to the proof by bringing me a collection of photographs of Chinese sculpture from the fifth to the fifteenth century after Christ, with the demand that I should arrange these in chronological sequence. I had seen one or two of the pieces, but had no accurate information about their dates; yet I constructed the required sequence quite quickly and without mistake. My colleague, who was aware of the evolutionary criteria by which I was working, was not unduly impressed, but admitted that the test must be considered a fair one and the demonstration an adequate proof of the correctness of my contention.

The previous generation of classical archaeologists was not very familiar with these principles and in consequence often found difficulties where none existed. Thus, two world-famous pieces of Greek sculpture which are in Paris in the Louvre have until recently been completely misdated by otherwise very competent critics. The Winged Victory from Samothrace and the Aphrodite from Melos are evidently products of the second century B.C., the former from the beginning, the latter from the end, of the century. A

knowledge of the laws governing the development of drapery forms suffices to identify the period of both of these masterpieces without argument or difficulty. Yet it is only during the last twenty years that the appreciation of this fact has become widespread, and it is still possible to publish articles discussing the date of the Victory or even of the Venus in the professional archaeological journals.

A still more striking instance may be found. The famous Praxitelean Hermes in Olympia carries over his arm a drooping mass of drapery whose interpenetrating solid forms are the strongest possible contradiction of the linear tradition of drapery throughout classical times. The inevitable inference that the drapery is due to a late hand and that, therefore, the extant statue is not the original by Praxiteles' own hand, but a copy from the Roman period, is so unpopular that those who maintain it are decried as sensationalists. We can only wait until the evolution of sculptural style is more generally understood.

I quote these instances to show that archaeology is not a pursuit whose tenets and behavior are as immutable as the Euclidean system of plane geometry, but that archaeology itself changes and develops. In digging, the whole method of excavating has changed since Schliemann's time. In the museum and the study-room, the growth has been no less remarkable. Forty years ago, the study of sculpture was a study of types. Most classical statues were Roman copies; many of them were torsoes or fragments which had been restored by clever Renaissance and Baroque

craftsmen. The function of the archaeologists was to sort and classify the individual pieces into the types which they copied or approximated or echoed. Long lists were constructed, setting forth the whereabouts of the thirty-six recognisable versions of the Artemis Colonna, or the hundred-odd torsoes based on the Doryphoros of Polykleitos. It is as though we discovered that in the Boboli Gardens at Florence and the back-quarter of the winter palace of the Duke of Markt-Redwitz, there were two fountain-figures each of which contained a surviving torso and thigh reproducing the pose of a more famous piece which Francesco da Viterbo had reconditioned for the art-loving Pope Benedict XII. Or again, in the Jardin des Tuileries in Paris, near the pond where the nursemaids take their charges to sail their toy boats, we will suppose that in the statue which some ingenious Frenchman has restored as an Amazon clubbing a tiger-cub, all the marble between the left shoulder and tibia is actually part of an ancient statue which may be classified as the 84th extant version of the Matrona Plorans type. My examples and names are largely fictitious; but their effect does not exaggerate the extraordinary antiquarian learning and typological knowledge of the generation in which Furtwängler and Amelung are the great names. Yet many of the best scholars of that period had no sure criteria for distinguishing a Greek original from a Roman copy, and were capable of coupling the most brilliant intuitions with a complete misunderstanding of the chronology of sculptural style.

The advance, since then, has come from a minute study of the technique of marble cutting and from an understanding of the general evolutionary principles which determine sculptural development. Without both of these new instruments at his disposal, no one can nowadays hope to become expert in ancient sculpture. A fuller description of these two may consequently be of interest.

The tools with which an ancient sculptor worked his marble did not differ essentially from those employed to-day, but they were used more circumspectly and cautiously. In particular the classical master was extremely wary of the chisel with its driven stroke and splintering force. He used a marble of coarser grain than is usual to-day, so coarse that the individual crystals showed quite closely. A hammer or chisel blow on these crystals would pulverise them, very much as a transparent glass bead which glitters in the light may be reduced under pressure to an opaque powder. Rather than destroy the life of his surface, the Greek sculptor preferred to pick at the crystals with an almost needle-like tool, to which he applied the mallet in order to put force into his attack. This was a slow and laborious process; yet irksome as it must have been, it allowed a marvelously accurate control of every minutest change of surface. Modern work, wherein the chisel chips off splinters and flakes, must repair this damage with the rasp and with a final polish. To an ancient eye, the result would have looked crude where the chisel-work showed, insipid and waxy where smooth polish had

wiped out all irregularities. A modern sculptor seldom cuts his own stone; an ancient Greek apparently never failed to do so. If by any chance he left the early stages of his work to another hand, it was inevitably to an apprentice who was himself a sculptor in the making. Even for the deep running shadow of drapery furrows the ancient master usually avoided direct cutting with a chisel. Instead, he perforated a series of round holes with auger and drill, picked away the thin walls between the adjacent pits, and then worked the run of the furrow in the resulting valley, shaping the monotonous series of drill marks into such variety of surface that no merely mechanical effect ensued.

So much for the creative period of the great sculptors. But in Roman times, when the artistic public was too numerous for the contemporary output of creative art and when the creative enthusiasm of Greece had spent itself, rich men adorned their villas and gardens with copies of the great masterpieces of the fifth and fourth centuries. Sculpture was now a commercialised trade, and the copyist could not fail to take a different view of his craft. The chisel came into its own, because it saved both time and labor and hence gained more money for its employer. A final polish would remove the more obvious signs of haste, and a lovely surface lustre atone for infelicities of execution. Especially when bronze, with its high reflecting power, was copied in marble, a luminous surface was essential. So far as we know, no Greek original from the period of the great masters ever had

this shoddy sheen of the copyists. The few apparent exceptions acquired their surface in modern times when they were cleaned and improved for the market or for exhibition in museums; and close inspection will usually show how and where the modern restorer has been at work. The Hermes of Praxiteles remains a glaring contradiction to this observation, since its surface has been rubbed until it shines like an Antinous. Those who still hold fast to the untenable belief that the Hermes is an original from the master's hand must find their way out of this difficulty as best they can.

When it came to the deeply cut furrows, the copyists sometimes merely ran the drill parallel with the surface of the stone and thus gouged a considerable stretch in a single operation; but this use of the so-called "running drill" is comparatively rare, because it is not usually possible to operate the instrument along the surface. Far more frequently, the old traditional method was employed, and a series of round holes were drilled on a line. When these had been drilled, a chisel was driven along, to break down the walls between the pits; but haste and economy produced a very different effect from the work of the original masters. The little holes, being the product of the same bit and auger, were all of the same size, and the furrow which the chisel then produced was quite uniform in width and in depth, a mechanical and hard line of shadow. Anyone to whom this "copyist's line" has ever been pointed out and who has compared it with the swing and life of an original

can never again fail to recognize it. Still and lifeless shadows, weak and waxy high lights, a general simplification of all the details with a consequent elimination of the subtleties of light and shadow and the surface-play of interpenetrating and shifting forms — all these make the work of the copyist a cold, mechanical, and vastly inferior substitute for the subtly pulsing and living prototype.

In late Roman times the degeneration of the plastic sense had gone so far that the even and mechanical furrow now dominated the entire effect. Instead of the vast range between highest light and deepest shadow, there was now a sense for only two colors, the illuminated surface and the unilluminated furrow, the white projecting surface and the black retreating line. And out of this interplay of black and white came a sense for the double pattern, the pattern of the foreground in light and of the background in dark. Each pattern made the other, since whatever was not white was necessarily black, as a piece of close lace over a dark cushion will make its own pattern and also create a pattern out of the dark background which it allows to show through. This curious sense of the interlocking pattern was destroyed wherever the decaying Roman Empire fell victim to barbarian nations without much esthetic sophistication; but in the East it effected profoundly the Byzantine and Persian minor arts of cloisonné and enamel, and still more fundamentally determined the Arab sense for design. The geometric puzzles of the Alhambra all depend on this curious realisation that the background is only

the negative image of the foreground and either (and therefore both) may carry the design.

We have drifted a thousand years beyond our schools of sculptural copyists; but the digression may serve to suggest how even such a technical affair as a sculptor's tool-kit may contribute to an understanding of the evolution of style and taste. It is this very topic of stylistic evolution to which I should like next to turn.

Far, far back in the millennial past, man made an observation which apparently no animal is capable of making — that the look of real solid things can somehow be imparted by marks or lines on a perfectly flat surface. The apparently solid world in a mirror can be drawn on the flat surface of the mirror by going over with a piece of soft soap all the lines that one sees on the glass. I confess that this seems to me one of the most amazing of magical feats: to convert a piece of solid space full of solid objects into an all but spaceless strip with lines on it. A primitive draughtsman cannot hope for a similar achievement. His brain sorts out the individual objects, one by one. The conceptual analysis which he uses for his ordinary speech is the guide to his artistic behavior. Everything for which he has a distinct name he will isolate and draw separately — really separately, as though there were for the moment nothing else in the world. And he will draw all of it: not the fantastic up-ended unreal appearances that flash on our eyes, but the real thing as he knows it to be, with four legs and a tail, two horns, two ears, two eyes, a nose, and a

mouth, or if the intelligibility of the body in profile has forced him to draw also the head in profile, then often only one horn, one ear, and one eye; but all of these will somehow be present, lest his animal be incomplete and therefore wrong. When it comes to an eye, it will be an eye as one knows an eye; not the curiously impossible shape that a camera records when it snaps a sitter unawares and obliquely, but a true almond shape with a circle in the middle and a dot inside the circle.

Primitive drawing is consequently nothing but the characteristic outline which best explains the object and includes the most of it that it is possible to show. One might be tempted to imagine that a peculiar act of esthetic volition is implied in the abstraction of silhouette drawing, which neglects all the solid plastic reality of the object and seizes on such a perfectly fictitious thing as the thin strip or border-line at which the surrounding air seems to begin. From the point of view of solid geometry or of a sculptor modelling a solid plastic form, these silhouettes do not truly exist, since there is no actual line discoverable running around the edge of the model. If the line is strictly non-existent, how can the most primitive man succeed in creating it? But actually, thanks to a psychological phenomenon which might be called the optical contrast margin, due to the meeting of two surfaces in different illumination or color, apparently there are really lines around objects as they lie on the retina. The eye definitely sees a contour band, so that it is only natural that the primitive artist should record it.

If he wishes to go further, he will naturally fill in everything within this border outline with a uniform flat wash in color, to make the whole object stand out from its environment, thus isolating it as surely in his art as the name which he gives that same object isolates it in his speech. Even so sophisticated an art as that of ancient Egypt seldom advanced beyond this primal state of the colored silhouette for its wall-paintings.

Obviously, the next and immediate step is the discovery of the need of accessory lines inside the silhouetted surface. The object is not fully explained by its contour, because not every one of its distinguishable and characteristic elements can touch the sky-line. Even in the very earliest attempts to draw man or animal, the eyes must have appeared inside the contour line; but these are not really interior lines. Rather, the artist after having outlined the head will begin all over again and make a new picture for an eye inside the first picture of the head. For this reason, even when the head is drawn from the side (and many animals are so much more readily sensed and seen with their heads in profile that they can scarcely be visualised or drawn from any other point of view) the eye is added as though from the front. It is the conceptual analysis of the thing into its elements, the disintegration of the unified visual appearance into the namable and rememberable parts, which explains this world-wide phenomenon of the full-front eye in the profile face. Out of these separate additions grows the feeling for the internal line to supplement the silhouette. The forelegs of the quadru-

ped penetrate the contours to the shoulder-blades; the very fact that the animal has been analysed into a creature with four legs makes it imperative that two of these legs should be complete and all four of them somehow appear. We ourselves are not aware how often we see three-legged and even two-legged horses: our logical good-sense would protest violently at drawing them in such a haphazard state of temporary mutilation.

By adding more and more abundant accessory lines inside the characteristic silhouette, a very convincing, because very intelligible, and a very decoratively beautiful figure can be drawn; but the design will remain in a stage that we agree to call "archaic." It is not "primitive," because there is nothing about it which could be criticised as crude or unconsidered or ill-considered. Yet it is archaic because it is representation by convention and not according to actual optical appearance. If ever an archaic horse should flash upon my retina while I sat day-dreaming on a bench in a city park, I should jump up wide awake on the moment, knowing in a flash that there was something very seriously wrong either with me or with the world.

What is essentially unreal about archaic draughtsmanship? My experiment of tracing with soft soap the picture in the mirror will provide the answer. When I follow over the lines which I see in the mirror, they are never the ideal conceptual outlines of any object as I know it, but the strange distortions of a world in perspective.

Once the discovery has been made that there is not one standard outline for each object, but that there are innumerable ways, corresponding to all the possible points of view from which an eye can behold it, — once that discovery has been made, drawing suddenly has a whole new world to explore. But a little experiment reveals a vital limitation to this new freedom. Not any chance foreshortening, but only those particular foreshortenings which harmonise with the imagined center of vision, will produce the illusion of actually seeing a true and solid world. Japanese wood-block prints often sin against this principle of consistency in perspective and are an interesting instance of the possibility of suspended development, an incomplete emergence out of the archaic. The great emphasis on decoration in these Japanese prints is a further survival of the archaic stage. Most nations, after having once made the crucial step, can find no point at which to pause, but move along a relentlessly pre-ordained track. Early Greek drawing concentrates on its men and boys, its women and girls, its dogs and horses, and fills its spaces with their forms. But fully developed perspective vision cannot tolerate objects out of focus with their surroundings. Archaic drawing lives in an imaginary space wholly out of contact with every other space; but a drawing which conforms to an imaginary but definitely fixed viewpoint is a spatial construction in a space precisely as real as the space within the mirror. I do not pretend to say where the space within the mirror actually is (for if it is *within*

the mirror it must be stealing for itself a good deal of our own space *behind* the mirror); but it is clear that Looking-glass Land must submit to the universal edicts of our own space, such as making things at a distance smaller than those close at hand, coördinating perspective to a vanishing-point, showing illumination of surfaces and cast shadows which all conform to a possible source of light. In brief, spatial setting even as illusory as that which lives on the flat surface of a mirror brings scenery and background into every picture and shrinks the gigantic figures of archaic art, which took the whole picture to themselves, into a size consistent with their surroundings.

As far as we can tell, the paintings of the fifth and fourth centuries in ancient Greece, that is to say of the great and most strictly classical period, still concentrated on the human element which was the heritage from archaism. During the Hellenistic Age, visual space began to settle and fill around the figures. The wall-paintings from Pompeii, all of which were probably executed shortly before or shortly after the death of Christ, fall definitely into two classes: those in which the figures dwarf the scene, and those in which the scene dwarfs the figures. The first are copies or adaptations from Greek classical prototypes, while the second are taken from late-Hellenistic originals or are themselves originals of their own day.

The religious painting of the Italian Renaissance most admirably illustrates every step in this same development. The early altarpieces are colored silhouettes which fill their frames without further

setting or surrounding. As foreshortening and perspective are acquired, a true space gathers and forms, and in that space the figures must recede to their proper focal distance. Any series of photographs of the Italian masters, when arranged chronologically, will illustrate this evolution.

But the recession of the figures into the setting of their surroundings draws the painter's attention inevitably to still another phenomenon. As objects recede, they change their color. We have been considering merely the draughtsmanship of line, and have included color only so far as to observe that archaic painting naturally tended to wash an even tone over all the surface inside the silhouette. The conceptual unity which an object possesses for the human brain tends to unify its color in the human memory. I mean, for example, that our logical analysis of a fruited bush into branches, leaves, and berries inevitably leads an archaic artist into using three colors, within which no very important distinctions are made: the branches are brown, the leaves are green, the berries are red. And so you will see them in Ghirlandaio and, not so differently, on Ionic vases, except that there the only available colors were black and purple-red and white. In this same way Greek relief sculpture used its colors in strong uniform shades distributed so as to make the objects intelligible — blue for the background sky, red for hair, purple for garments, gold for ornaments, green for a belt or a ribbon, yellow for a wreath. In painting, even as late as the fourth century B.C., the great Greek painters

were said to have used a palette of only four colors. In sculpture the unlighted folds and the illuminated ridges must automatically have produced a tonal range within every color no matter how uniformly the wax-paint was applied, so that a garment painted uniformly blue must have appeared darker in the shadows of the folds and lighter on the sun-struck ridges. The wall-painters, working on a uniformly illuminated flat surface, must have tried to reproduce this effect and mixed each of their colors in at least three strengths or grades — a light tone for the high-lights, a normal tone for the main expanse, a dark tone for the shadows.

The painters of the early Renaissance in Italy secured this effect much more ingeniously. They drew their figures in monochrome of black or *grisaille*, darkening the drapery furrows and indicating the chiaroscuro range from the white of the untouched canvas or sized board to the black of the heaviest shadows. Then they applied a glaze of transparent colors, reds and blues and greens and yellows, through which the monochrome drawing beneath was plainly visible. Where the underdrawing was dark, the color would look deeper, and lighter where the canvas was left blank. Without mixing their color-shades at all, they succeeded in producing a tonal range.

Such a stage is still an archaic one. Just as in drawing we found that the crucial step out of archaism occurred with the substitution of visual perspective for the ideal concept, so in the use of color the crucial change is not from monochromy to polychromy but

from conceptual color to visual illusionism — from the color which the brain arbitrarily ascribes to the amazing actuality which the eye really beholds.

I can better illustrate this point by a brief digression. Recently I was interested in helping through the press a publication in color of the magnificent medieval Byzantine mosaics which still exist in Greece.⁴ I have always thought that colored reproductions of old mosaics are ruined by the uniform bright gold background which water-color artists and printers alike insist on using. Consequently, I was equally insistent that, for the first time in the history of such reproductions, the plates should show, not gold in the abstract conventional brilliant tone, but the much more changing and elusive range of colors which the tarnish of time had produced. By using photographic *lumière* color-plates and sending these directly to the printer, the author of the book was able to supply him with a very close approximation to the real appearance; and by repeatedly going over the color proofs in the presence of the original mosaics, I was at last able to secure the real olive-green tinged with orange-brown which I actually saw in the little church of St. Luke under the slopes of Mount Heli-con. Last summer a very distinguished American medievalist reviewed the completed book and commended everything — except the color of the gold background, of which he complained that "the glorious gold backgrounds are often represented by a sickly greenish yellow." In these particular mosaics the "glorious gold background" is purely in the re-

viewer's imagination—quite genuinely there, however. Very few of us remember color wholly visually. We are apt to name the color to ourselves (not necessarily very consciously) as we see it, and having once identified gold as gold, the passing years will encourage the generic concept to spread its sheen ever more goldenly over our memory. Thus in retrospect waters and skies are blue, forests are green, and wheatfields are golden brown. So evil is this habit that we have only to recognise an object as a leafy tree in order to see that it is green, which may be a very inadequate description of its actual appearance. Many must have made the experiment of looking upside down at an actual landscape in order to discover what its true colors are. Only when the familiar forms with all their habitual associations are destroyed can we see the world as it truly appears rather than as we have decided to envisage it.

Even the very early Italian Renaissance knew that far-away woods are blue instead of green and that there is purple in almost every distance; but the inherited primitive illusion still insisted that objects were distinguished one from another by their characteristic colors. Occasionally such man-made articles as chairs and tables may have a flat and uniform hue under peculiarly favorable conditions of position and illumination; but, such rare exceptions apart, the truth is that the visual field of sight at any and every moment is such a weird flux of unstable colors that it is a standing miracle that the brain can discern anything. Herein lies the primary reason why the brain

must refuse to see all the colors. Only by deliberately screening out what we have learned to be irrelevant for us and holding together all that we have sorted into individual objects and can hold together by the magic power of a name, only so can our seeing be of any practical use to us. Ours is a pragmatic world of sense: the ordinary eye sees only what it can use and discards everything else. Painting therefore has two huge steps to make. First, if it is really searching to reproduce the outer world, it must adapt itself to copy what the eye actually sees, the visual and not the conceptual appearance. Secondly, it may, if it chooses, penetrate into the world which the eye *might* see if it happened to select and discard differently, substituting the personal and perhaps arbitrary world of an artist's eye for the normal world of the normal eye. The first step is easier to comprehend than the second and will not detain us long, even though it detained modern painting for five hundred years.

We have seen that painting began as line drawing with color added, as though shape were the primary quality and color a phenomenal accident. This is a prejudice, founded on a very good reason. Solid form is accessible to us through two senses: we can see the shape of an object without touching it, and after closing our eyes we can feel the same shape that we have seen (nonsense though that may be if examined too literally!). But the color of the object can only be seen, and not handled or touched. The Greek had a tremendous bias in favor of the tactile form, as we can see by his genius for sculpture, architectural line, and

plastic drawing. Very clearly, to the Greek the geometrical shape was the essential reality of an object. The ontological philosophy of Plato and Aristotle is based on such an assumption, and there are countless passages in Greek literature to support the theory. Hence it is arguable that Greek painting could never have made the final step in its evolution, but would have remained in suspended animation in much the state in which we see it in early Roman times. The crucial prerequisite for making the final step of which I am speaking is the realisation that painting is not the imitation of geometrical form but the re-evocation of light. All that we see is not a tangible world, even if we think it is: what we see is light-rays falling upon our eyes. Light is the visual reality, and with light a fully realistic painting must be concerned. But the moment that the painter is convinced that he is not drawing the outlines of objects which can be touched, but is merely arranging colors so that they will reflect light in all its gradations of intensity and tone, his world of objects crumbles and dissolves, having lost all actuality for any other sense than sight. The change is staggering. Objects which would be discrete and solid and individual if one walked among them and sought to move or destroy them may now lose their edges and boundaries, may fuse and flow into one another. All is only a changing wonderful sea of light. Not the world as we have come to know it, but the world as it happens to look when we are only looking; not the objectively real, but the subjective impression: this is the prototype

which the painter now imitates. From Rembrandt through and beyond Monet the path leads logically, intelligibly, and inevitably.

In antiquity the tactile prejudice was too strong for impressionism ever to come into its own. Yet the paintings from the catacombs and elsewhere in the second and third centuries after Christ show that the tyranny of line-drawing has at last begun to loosen and that painters can make a human figure in terms of splashes of light and dark paint without drawing an outline at all. But in Mediterranean lands, where the high illumination of the background really creates a silhouette for the eye, the technique of impressionism is a defiance of the solid world and a signal that the evolution of the painter's technique has overstepped its most useful stage. In ancient painting, impressionism is the signal for a dissolution of good draughtsmanship; the light which blurs and blends and wavers is the afterglow which ushers in the night.

* * *

What has all this to do with archaeology?

The great wall-paintings of Greece are destroyed forever; they were painted on perishable plaster or with wax upon marble, and the most that we can ever hope to find is the weather-stain of the painting upon the stone, a ghostly negative of the composition which has long since disappeared. Yet there are echoes and imitations of these paintings: contemporary echoes in the far less ambitious scenes upon terracotta vases whose glaze is almost inde-

structible; subsequent echoes on the painted plaster walls of Roman houses which even in ruins can survive under earth and emerge again, sometimes for only a few days of brief brilliance before re-exposure to the light destroys their colors forever; finally, many of the surviving ancient mosaics must echo famous paintings. From all these sources it may be possible to reconstruct the history of Greek painting — but only if he who attempts this reconstruction is so thoroughly master of all the phases through which painting must evolve and all the laws and reasons which are the determining factors in this evolution that he can grasp the minutest hint and infer without essential error the invisible from the tiny part.

This is the new archaeology of art. The old school of a couple of generations ago gathered assiduously, collated, and compared. It was composed of collectors and antiquaries, who admirably performed their task, but ended with thousands of fragments in their storerooms. The new school treats nothing as isolated or isolable, but seeks to fit every fragment into place, hoping to piece together a gigantic unity wherein as it were a single human eye and hand and brain strives and learns and advances through a thousand years of effort and creation. A great French philosopher chose as a title for his most famous work the haunting phrase *L'Evolution Créatrice*. The new archaeology would like to envisage ancient art as such a self-creating evolution. Its aim is not to accumulate, but to understand.

IV

THE HUMANISTIC VALUE OF ARCHAEOLOGY

THE preceding lectures will have sufficed to show the methods and behavior of classical archaeology. It claims for its field of action the material remnants of the ancient world and for its function the rehabilitation of that world. Archaeology collects and classifies and then makes inferences from what it has gathered. It collects actively, in that it even removes the earth covering ancient sites and draws their hidden objects to the light. It classifies industriously, in that it searches the museums and private collections of every country in the world and publishes albums and portfolios in which all its discoveries are assembled. Thus there are in process of publication a corpus of all the ancient vases; a corpus of all the ancient sarcophagi; a corpus of all the ancient Greek, a corpus of all the Latin, a corpus of all the Etruscan, inscriptions. There are monographs on special classes of objects: a certain type of terracotta relief-plaque called Melian; a certain type of early bronze jar; the sculptured gravestones of Athens; the accessory ornaments on these gravestones; the extant sculpture in a peculiar material called porphyry, all of which was quarried from a single mountain in the desert two

hundred miles south of Suez; and so on and on, a formidable list which well may appal the newcomer.

What does archaeology do with all this material? It adds more to it. New objects are turning up or are being turned up almost daily; each and every one must be assigned its proper place in the great scheme of classification. Under this aspect, archaeology is a descriptive science not so very unlike botany or entomology. It goes abroad to catch its butterflies and beetles, and brings them home to study, classify, and arrange.

The public has been dazzled by the tomb of Tutankh-amen into picturing the archaeologist's business as essentially romantic; and there is always an expectant press to foster this illusion. Let me suggest to you what a modern classical excavation really is, by quoting from a vivid and accurate description written by one of the American staff of the expedition now at work in the ancient market-place or Agora at Athens.

The excavator . . . is more absorbed in the process of finding than in what he finds. Every basket of pottery, every object of any account must be given a label according to depth, and according to a system of numbers and letters which indicates every square metre in the area. The difficult and absorbing processes in excavation are the methods of digging for evidence concerning date or history, together with the interpretation of this evidence as it is being destroyed by that very digging. An ancient street has to be cut through that its date may be ascertained, a drain has to be emptied that its latest period of usage may be discovered and the coping against it removed that its period of construction may be determined. Always a small section must also be preserved as a reserve for future study. The strat-

egy of excavation is amazingly complex, particularly in a city like Athens which was incessantly occupied. No neat stratification survives, but a heart-breaking confusion. Modern cellars cut into bronze age deposits; Roman villas lie at a lower level than geometric graves; wells and cess-pools pock-mark the entire area. The most exciting wall can never be followed to its conclusion and the most tantalizing inscription breaks off like Plato's tale of Atlantis. The best always seems to lie just out of reach. No wonder archaeologists are always looking forward.

The simplest digging is grave-digging, for there, at least, the skeleton is disposed in a jar or a pit and the pottery is usually complete. One has merely, in the embarrassing presence of a movie-camera, to peel off the earth with delicate tools, such as toothpicks and tooth brushes, until the objects stand out clear and new-looking for drawing and photography. This work gives most of us a shocking pleasure. As I was clearing the grave of a child who had died about a thousand years before Christ, with his miniature pots, the leg of his doll, and the bones of his pet animal carefully laid beside him, an American woman suddenly descended upon me. "Oh, let the poor soul lie!" she cried, but I shook my head and placed him firmly in a cardboard box marked 40/IZ.

Each important object, labeled and numbered, is brought to a large workshop room, where it is washed and mended. . . . Crumbled and filthy bits of pottery . . . turn into graceful vases; unpromising bits of drapery or *membra disjecta* of terracotta . . . into gay figurines. In another room the coins and bronzes are cleaned by the electrolytic process and a gruesomely dental brush driven by a small motor. Thence the objects pass to the catalog department . . . [which] receives the unfortunate . . . in a busy American office full of steel files, desks, trays and the clatter of typewriters. There the objects are photographed and their histories examined. Large cards are filled out regarding their origin, height, age, and infirmities.

Unfortunately, the modern excavator is possessed by a social conscience and the fear of his colleagues. He is no longer digging for his own amusement or his own edification; he is an emissary of science, representing all the members of his profession, now alive or to live in future days. "To dig a site is to destroy it." The moment of excavation is unique; it represents for most objects a translation from an undisturbed (but hitherto invisible) historical setting to a visible (but historically irrelevant) environment. The potsherd on the museum shelf still has its artistic value; but it has probably lost its historic importance. It now dates nothing but itself. The excavator wishes to know not only what he has found, but everything that has been going on in the spot where he found it. The minutest information from stratification and surrounding soil may at times be crucial for an archaeological find. I say, *may at times*; and herein lies the misfortune. The excavator himself cannot tell how much of his data will be valuable. If he is not an incurable romanticist or too busy with what he is doing to stop to think at all, he must be aware, even while he is compiling it, that between 90 and 100 per cent of the information with which he loads his day-book is utterly valueless. But since he cannot know what fact, what aspect, somewhere, some day, will be important or interesting to someone, he must go on with his routine, deliberately making himself as uncritically methodical as possible. For the excavator who insists on being intelligent and, like Adam, distinguishes good from evil, is a dangerous nuisance

around an excavation. In his arrogance he has dared to judge what no man at the moment can possibly decide. And so, with nose to the metre-stick and eyes glued to the breaking sod, the excavator must carry out his infinitely tedious routine. For he is in the front line, and behind him waits the vast rank and file of scholars born and unborn. To encourage him he has the self-confidence of an aspiring science; to keep him at his post he has the knowledge that he must not betray his trust.

Then there is the museum catalog. This is no longer the front line of the open field, but the base station well behind, to which all the captured prisoners are sent under guard, to be interrogated and written up. Each has his *dossier*, his personal docket. Let me read you a specimen:

PORPHYRY

Left Ear. Formerly in private possession in Rome.

A piece for separate attachment to a statue, comprising the left ear and adjacent parts. Height of the ear ca. 0.17 m., of the whole face (estimated) ca. 0.42 m. and of the entire statue ca. 4.20 m. or $2\frac{1}{2}$ lifesize. — Excellent workmanship. The hair, cut half short, shows stiff, narrow strands, naturalistically waved, rather like those on the colossal bronze statue of Constantius II in the Conservatori. Apparently, lightly curled over the temple and parted in the middle of the back of the neck, not hanging very low and terminating on an arc or line, as may just be discerned on the fragment. No need to assume a diadem or headband.

Attribution. The material and haircut imply an emperor with complete certainty. Date later than the middle of the

fourth century after Christ unlikely, because sculpture in porphyry probably ceased at about that time. Enough of the hair has survived to show that its style is the Constantinian and that it is treated at the base of the neck in the manner of numismatic portraits dating approximately between 325 and 330 A.D. Before that date the hair is trimmed shorter; later, it hangs lower. From this chronology the attribution to the family of Constantine becomes established. Most probably, because of the colossal size, Constantine the Great, himself, was intended.

I submit that only a brilliant archaeologist could have tracked down a colossal porphyry ear hidden away from the public in some private collection, and proceeded to identify it as part of a destroyed statue of Constantine the Great. But I have not quoted a typical case. Most of the objects in most of the catalogs of the world's great collections have to be content with a sober description of themselves, their height and width, material, state of preservation, modern additions and restorations (if any), and nearest affiliations.

Such catalogs are an obvious necessity, since all general statements and conclusions about ancient objects must take account of all the surviving specimens. It is therefore the tacitly assumed duty of every museum to publish, as soon as time and money permit, a full and serviceable catalog of every object. It cannot be pleaded that any of the objects in any museum are not sufficiently important to find a place in the official catalog, since in that case they are *a fortiori* not good enough to be in the museum. And yet how tedious it is to construct a correct "scien-

tific" catalog of, let us say, a collection of four hundred and seventy terracotta figurines, giving the dimensions of each, the quality of the clay, the size and position of the baking hole, the traces of original color, the fractures and mends, the missing fingers or toes, describing the pose (which will not differ essentially from a score of others), determining the number of moulds which were used and whether any of these were also used for corresponding parts of any of the other figurines in the same (or in any other) collection, and finally assigning a date of manufacture (in the same general period in which three hundred and fifty-two of the figurines have already been placed)! Yet the work must be done, and, strange as it may seem, some thoroughly competent person can always be found to do it.

Not all museum activity is so monotonous. For choicer spirits there is an occupation which cannot be called dull, but which demands such special gifts that few can indulge the vein. A single illustration must suffice:

In the museum in Dresden there stood two copies of the same lost original statue of Athena. On one of these an alien classical head had been attached in modern times; on the other there was set a head which resembled exactly a singularly beautiful version preserved in a museum in Bologna in Italy. But as this Bologna head was thought not to represent Athena, it was argued that its counterpart in Dresden could not belong on an Athena torso, and hence it was removed. The Dresden museum was accordingly left

with two headless Athenas of identical type. Furtwaengler, in studying this type, reached the conclusion that the Bologna head should after all have represented an Athena, even though it wore no helmet. On renewed examination he found that the Dresden replica of the head had been wrongfully removed from one of the Athena torsoes, because, though it was chipped and injured, there was a spot at which the break in the marble of the head exactly matched a break in the neck of the figure. Head and body, therefore, did belong together after all. But the workmanship was thoroughly mediocre. Still, there remained an excellent version of the head (the one in Bologna) and an excellent version of the body (the other, headless Athena). A cast of the Bologna head was made and sent to Dresden, where to everybody's surprise it exactly fitted the headless body. Thus a consistently excellent version of the lost original was reconstituted, and sculptural archaeology was very definitely enriched by a new acquisition of great importance.

For such gifted investigators, the many museums of the world form but a single collection, in which every object takes its proper place. But for more ordinary mortals the illustrated catalogs must still be the only means of uniting Bologna with Dresden, New York with Berlin.

Collection and classification: are these the most that archaeology can hope to achieve? Before answering the question, we might appeal to other sciences which have, like archaeology, begun with a descrip-

tive phase. Geology sorted and classified to its heart's content; but little by little it passed beyond the purely descriptive stage. Thus, it found that many materials appeared as crystals, and descriptive crystallography accordingly catalogued the various shapes of these crystals; but before long, crystallographers were reading treatises on the mathematical presuppositions of symmetry and wondering whether the mechanical aspects of atomic and molecular structure could have anything in common with the mechanical dispositions involved in crystals. And it was all very well to explain how the earth's surface was by origin in part igneous, in part deposited by sedimentation, or to show how buckling and subsidence and subsequent erosion could produce the face of the earth on which we stamp around to-day. But what of the length of time that such processes took? and the skeletons of once living things, the fossil imprints surviving from remotest periods when what is now coal was once vegetation? and in short, the unutterably vast history which opened out, at first terrestrial, but ultimately stellar, and even cosmogonic? The geology textbooks of to-day are astoundingly different from those which I found among my father's books.

Linnaeus, the botanist, devised a scheme for classifying all the plants and flowers of which he could get information. The system depended on floral structure and must, even to its contriver, have at times seemed somewhat arbitrary. The non-botanically minded of to-day are apt to be profoundly puzzled

at the strange blood-relationships and cousinships which flowers and vegetables are made to acknowledge upon the census-lists of science. The Linnaean classification is essentially static, in that it takes the flowers as so many separate specimens among which it tries to discover structural relationships. It seems to look neither before nor after, but to be content with the present. Modern botany introduces a moving force into the motionlessly assembled ranks of the Linnaean catalog, and sees that the earth's flora must have evolved as definitely and as intelligibly as the animal world, and that its future is as fascinating as its past. A purely descriptive disciplinary study has become part of the vaster science of life in its evolution here on earth.

Is it too much to prophecy a similar expansion in archaeology? It too has had (and still enjoys) its collective-descriptive phase. But by this time there is enough material accumulated to make it no longer hazardous to wish to look beyond the mere objects. Scattered through the world's museums is the formidable array of all the actual material collections of the archaeologists: what, in heaven's name, do they all mean?

The revivifying force which impelled geology and botany out of their purely descriptive phases was the theory of evolution, which proclaimed that all the static motionless array of the catalog was merely time's cross-section of a vast process, moving and changing and ceaselessly producing, so illuminating the apparently casual affinities and relationships that

in the end we thought we saw *why* things were, because we had beheld *how* they had become.

Will such an attitude bring life to the dead matter of archæology? The world's museums are full of men of stone, dead marble statues carved into human likeness. If all the surviving ancient statues of the world could be gathered under our windows to-morrow, we should rise to look upon a vast army of lifeless men. Can any life be put into them? Will an appeal to evolutionary theory make their weird ranks more orderly?

Like painting, sculpture in its early periods is controlled by the dictates of line, conforming not to plastic but to linear laws. Because the eye cannot at any moment see all around an object but must look at it as though it were flat in a single plane of sight, it is impossible to visualise an object in the round. We may visualise as many different aspects of a solid object as we choose to evoke (much as we could photograph it from every side and assemble the series of snapshots to give a complete account of all its appearances); yet this is not to see the whole thing at once. Through the sense of touch we may build up a tactile idea of a solid; but sight is a more potent sense than touch. Hence it is that a primitive sculptor always tends to carve an object as it looks to the eye, rather than as it feels to the fingers, and so works from only a single point of view or at best from the two viewpoints of full-front and profile. In carving a human head, he will work at the profile of nose and forehead and chin from the side of his block, and at eyes, nostrils, and

mouth from squarely in front. The face which results, considered geometrically, is merely the interpenetration of two planilinear designs at right angles to each other. A full-front face projected from the front and a profile outline projected from the side will meet in sharp edges bounding flat surfaces, and archaic sculpture will actually show a smooth bridge to the nose, bounded by sharp edges, around whose corners the rest of the nose will continue at a right angle back to the cheek. The cheek will run in a single plane from jawbone to ear; a similar plane at right angles to it will mark the forehead. The eyes will lie flat on the face, the ears will lie flat on the side of the head. I am describing a very primitive condition; yet even an advanced archaic head will essentially be constructed on this same formula.

Details such as the hair, and the ribbon which ties it, will be added as though, like the details in an archaic drawing, they were internal lines which could be introduced after the main silhouette had been set down. The head, in short, is there first, and the hair is then carved on it, in contradistinction to the obvious plastic condition which demands that the hair, if it projects out beyond the head, must come first. A bronze-caster had better fortune, for he could add little bronze curls afterwards and hang them all around the head; but a marble-cutter had to be content to cut the hair *in* rather than build it *out*. And as the actual plastic appearance of human hair is unseizable and unrememberable, he could merely invent little zigzags and wavy lines to give the effect, and

carve these in an orderly manner all over the head. The hair ribbon, too, had to be carved on the head. In a full-length figure, even the clothes had to be carved on the body. On the superb late archaic statue of a seated goddess, now in Berlin, the drapery follows the nude form minutely until it leaves it to jump to the arms of the throne, to which it then adheres with an equal tenacity. The curious solid shape in empty space which a loosely clothed person occupies is so irrational and so out of relation to the human figure inside the clothes that the primitive artist cannot visualise it. Either, then, he will visualise a human figure and somehow carve the drapery on top of it, or he will imagine some simple solid shape such as a round pillar, a square pier, or a solid rectangular block, and animate these with enough drapery to suggest the object which he is striving to evoke.

From this stage onward, the whole development of sculpture is nothing but the struggle to think plastically instead of in terms of line and surface. The sculptors who worked in bronze must have been the leaders, since their wax models allowed them to add accessory plastic detail after the main proportions of a figure had been established, whereas a marble-cutter could only cut away and hence could never remedy his failures to visualise the plastic complications before he came to carve them. But precisely for this reason, the marble-cutter must have had recourse to wax or clay preliminary models in which he eliminated this fatal shortcoming.

Yet even in such a pliant medium as clay, the sculp-

tor could not work more freely in the round than his powers of visualisation permitted. If one cannot see and feel plastically, it is absurd to bother about the plastic appeal of one's work. Just as an actor on the stage consciously faces his audience and shifts his actions and poses to their view, so an early sculptor made his statue to front its public, thinking of its pattern and appearance as he wished the spectator to behold them. To make a statue which has no front is like building a temple without a façade.

Praxiteles' work was still frontal. His figures have escaped that lifeless rigidity of the bolt upright pose by throwing so much weight upon one leg that, in order to keep their equilibrium, they often are made to lean upon some convenient prop or support. A graceful, almost languid, swinging curve pervades their bodies from ankle to chin. Stone has lost its rigidity in the illusion of yielding flesh. Yet still this plastic sense is not fully developed, because the Praxitelean statues are conceived as flat pictures in the round. A stage-setting may have depth and the illusion of plastic space for the audience; but it is nothing at all for the stagehands and the actors behind the scenes.

Lysippos was apparently the first to break frontality deliberately by inventing the formula which we find in the *Apoxyomenos* and the *Eros Stringing his Bow*. Both arms are carried across to the same side of the body; the feet point and the legs turn in different directions. There is no longer an obvious single position which the spectator is expected to take in

viewing the statue. Because various parts of the statue face in various directions, there is no longer a single dominant silhouette. The statue gives the impression of having been conceived with various silhouettes in mind, to have been thought plastically instead of in terms of a single aspect or appearance.

The pupils of Lysippos improved upon the formula by carrying it to its logical extreme. Instead of bending the figure to right and left, as Praxiteles had done, they twisted and revolved it to a spiral column. The face looked in one direction, the chest faced another, the upper legs still another, and the feet were pointed in still another. The audience had surrounded the actor, who was deftly managing to face all of them at once. The pose is immensely significant, not merely because it is an ingeniously flawless device for a polyfacial pose, but because it can only be interpreted as proof that the sculptors were at last thinking and seeing stereoscopically, which means nothing less than looking around solid corners.

When we gaze at a chair and understand what it is, we have already become so familiar with its aspects from a great many points of view that we can construct a notion of its solid structure (such as we can derive by running our hands over all its parts) from any single aspect. The single aspect is sufficient to recall the others. Otherwise it is very doubtful whether by looking at a chair we should have any idea what it was. Of course, we need not have seen this particular chair before. We can even look at a wholly new object and understand its shape, but only be-

cause by dint of practise during infancy we have learned to understand the geometry of solids from their planilinear appearance. In most people, the accomplishment is purely pragmatic: they see stereoscopically only enough to identify and make use of objects. In art, the senses are to be used non-pragmatically, not for the practical advantage which we can derive, but merely for the delight of an activity in its highest perfection. Art uses the human eye much as a young dog uses his legs, not in order to get anywhere, but for sheer pleasure of leaping and running. We have all acquired the pragmatic trick of taking the flat pictures which fall on our retinas and interpreting them as a world of solid shapes which are in one-to-one relationship (as the philosophers say) with that world which we can explore when we close our eyes and feel around in the darkness with our fingertips; but if we will only heighten this power of stereoscopic vision, so that we are really vividly aware of all the invisible sides and surfaces of the object which we see, we shall discover the plastic sense toward which sculpture moves as its ultimate goal. And yet just when it had reached that goal in antiquity, just when it at last had learned how to produce omnifacial poses in complete understanding of the plastic appeal, just when the long journey toward perfection was accomplished — the whole art began to collapse, and before two centuries were out, Greek sculpture was no more. Why?

We have seen that in its earlier phases sculpture, though a plastic art working in a solid medium, is

enormously dependent on the line. The block of stone is hewn into shape by being trimmed to follow an outline or silhouette; the interior details are drawn as lines on the surface of the stone and realised by carving, which is only a device for emphasising the linear element. Detail comes by accumulation and accretion. A finger is only a tubular projection from a hand until the finger-nail and the folds which articulate the knuckle-joint are drawn on it. Still it remains a schematic, a conventionalised, finger, until prolonged practice and ever-renewed observation of nature add one by one all the shifts of surface and changes of plane which make the stone imitation an exact replica of the actual. What is true of a finger is obviously equally true of every part of the body. Objective realism in sculpture is a gigantic task, to accomplish which there must have passed many generations wherein persistent effort through countless repetition brought ever greater success.

It is inevitable that the trend of sculpture should be toward objective realism, precisely because the attainment of realism is a cumulative process, in which each apprentice can add a new detail to his heritage from his master; in fact, precisely because it is a process, it must proceed. Herein it resembles the natural sciences. The growth and trend of descriptive astronomy is foreordained. Once man has begun to notice the stars, he cannot fail to notice that, though all of them move, some wander while others are relatively fixed; some are apparently larger than others; though most are silver-white, a few tend toward red,

orange, or blue; though most are apparently sharp in outline, many are cloudy and unclear. Their arrangement is utterly disorderly and irrational; but here and there a design or pattern emerges. On these, man seizes as nuclei around which to gather the otherwise unseizable myriads; and thus the constellations were created. From classical antiquity the Arabs inherited this catalog, without (I venture to imagine) adding very much to it. The advent of the telescope added at first thousands, then tens of thousands, of stars hitherto invisible. The tissue of heaven was now too closely seen to show any outstanding patterns or designs. A map-classification, by latitude and longitude, necessarily supplemented or supplanted the grouping into constellations. The differences in color and form were now more apparent: twin-stars, clusters, nebulae, star-clouds were distinguishable. The descriptive process had grown into an undertaking gigantic in its detail. The spectroscope increased still more man's power of vision, and added a wholly new element, the calculation of motion and speed among the stars. Shapley's recent little book, *Flights from Chaos*, will give the layman a glimpse into the staggering state of development reached to-day by the age-old process of ordering and identifying the stars.

My parallel with the development of sculpture is, I hope, apparent. Just as the process of star-cataloguing could only move in one direction, forward, by adding ever more stars to the catalog and gathering more and more information about the stars al-

ready listed, so the imitative plastic art necessarily collected and acquired greater and greater knowledge of anatomical realism, exploring every superficial detail of the human body, the vastly intricate physiognomy of facial expression, the subtle changes of every imaginable pose which a human body can assume. The linear and conventional indications of archaic art gave place to the correctly modelled solid form; the linear folds of drapery still wholly supreme in the classical period yielded to the intricate crinkling and billowing of cloth suspended, wrapped, or fitted on the human body, as we see it in late-Hellenistic times. But when the technique of realism has been learned, when men can imitate man in marble and bronze as perfectly as marble and bronze permit, whither shall sculpture develop further? When the last star has been mapped, its motion, its constituent elements, its relationships to the rest of the stellar system recorded, with whatever else can be discovered by a terrestrial observer, — when in short the titanic catalog of the heavens has been finished, what will the astronomer do next? Knowing the size of the task, the astronomer of to-day will smile at the question; but the academic hypothesis is a pertinent parallel. When the technique of realism has been attained by any imitative art, the path along which generations of artists have been moving comes to an abrupt end. "Dead End!" says the placard. What is to be done? Some will stop and stay where they are; others will turn back along the way they came; still others will try to explore the surrounding

jungle, seeking to break a new path that will lead them somewhere. In modern times, sculpture reached this Dead End of realism in the nineteenth century, painting in the early twentieth century. The chaos in the arts to-day has been ascribed superficially and erroneously to the soullessness of modern mechanistic civilisation, to the Great War, to general restlessness, to decadence, to the present depression. None of these has had anything to do with it. The imitative arts had completed their development toward imitative realism. That they began this development out of the conventionalised stagnation of the Byzantine tradition back in the thirteenth century may be a historical accident. That it took them the better part of seven centuries to pass through the whole development may have been conditioned by many external factors — though it is rather startling that Greek art, beginning about 650 B.C., took almost exactly the same length of time to reach the Dead End of realism!

What is modern art to do about it?

What did ancient classical art do? I have already suggested that when men reach the Dead End of a road which they have been traveling, they must do one of three things: stay where they are, go back, try to break a path in a new direction. So in antiquity, many stayed where they were; hence the dead level of excellent mediocrity which so distinguishes Roman imperial art, particularly in the provinces. The zest goes out of any enterprise by dint of mere repetition. In the periods when the technique of art moves and

men feel it move in their very hands, a tremendous excitement seizes and elates the artist. The enthusiasm of Periclean Athens and Medicean Florence does not come from Pericles or the Medici, but from the great buoying and lifting power of the moving wave of technical advance. The nineteenth century was scientific, the twentieth century mechanistic, not so much because man had ceased to be an artist, as because the sciences were at a phase where they could move and the arts were not. The twentieth century will continue to be scientific and mechanistic because the line of progress — and rapid progress — is obvious and, therefore, inevitable. The Edisons of tomorrow *must* make the inventions which are inherent in the mechanistic science of to-day, and they will have all the personal elation of discovery to buoy them up and carry them on. As soon as everything has been accumulated that lies in the way of advance, the excitement will lessen, the advance will grow slower, the great scientific age will approach its close. If some other path then opens, man, the protean, will once again be religious, or poetic, or artistic, or mystical; if nothing else offers, he will be sensual or animal or humdrum matter-of-fact. The spirit which now animates scientific and mechanistic progress is perhaps at the bottom very little different from that with which the artists of the Renaissance swung forward on their destiny.

When the Dead End is reached, as I was saying, some stop where they are, as in the days of Roman imperialism. Others go back along the road. These are

the revivalists. For antiquity, we may watch them retracing their steps. First, rebelling against the bravura of anatomic realism of the Hellenistic schools of Alexandria and Ephesos, against the restlessness of the poses which alone offered novel combinations and technical problems, they returned to the augustly quiet or grandly severe style of fifth-century Athens. Such was the sculptor Apollonios the son of Nestor, who in the powerful Belvedere torso and the brutally magnificent Seated Boxer combined the realism of his day with the unreal abstractions, the large clear surfaces, the broad simple divisions, the architectural clarity and power, of Pheidias and his pupils. Apollonios Nestoros was an Athenian and worked in the first century before Christ. The Attic ateliers which preceded him were utterly uninspired, run-down, and depleted. By turning back, Apollonios borrowed from the life of a great tradition and transfused its virile blood into the anaemic veins of his age. A little later, the sculptors are retreating somewhat further into the past and reviving the style just before Pheidias, the period of the transition from the archaic. Menelaos and Stephanos adapt and combine statues in the severely formal manner of Polykleitos and his immediate predecessors. During the lifetime of Cicero, when Verres stripped Sicily of its antiquities and Lucullus assembled his ancient masterpieces, the Roman connoisseur had learned to appreciate the keen savor of the early fifth-century masters. By the time of Augustus, the retreat has moved still further back along the road, and the rage is now for the

archaic. The workshops of Athens are humming with new life, manufacturing plaques for wall-decoration and urns for garden walks, with archaistic "brede of marble men and maidens overwrought." To a realistic age, archaic art is an affectation; and these Augustan versions are, quite explicable, overdone, with mincing tip-toe poses, with precious "poppy or a lily" in an archaistic hand, and impossible swallow-tail flutters of scarf-like drapery. But the taste is genuine in so far as it marks a revolt against the artistic emptiness of realistic perfection.

By the time of Hadrian there are even those who appreciate actual primitives, the crude ungainly beginnings wherein one senses all the more strongly the ambitions of a naissant art. That pedestrian-souled antiquary Pausanias can scarcely have invented his phrases when he said of such primitives that the works of Daïdalos, "though rather grotesque to look on, have nevertheless something divine about them." This judgment must reflect the verdict of the more sophisticated public of the second century after Christ.

How exact a parallel does modern Europe offer with its recent revolt from realism, starting with the pre-perfectionists who extolled the Italian paintings earlier than Rafael, and like Burne-Jones and Rossetti made their own contributions in a strange mixture of realism and imitated affectation! And how remorselessly since then has modern taste steadily re-ascended the path of time to Giotto, to the primitives, and finally (jumping bounds) to all naissant and finally all barbaric and barbarous art!

But, just as there comes a Dead End to the road in the forward direction, so those who turn back must ultimately come to a stop, since back of the most primitive primitives there is merely nothing. Not those who light their campfires and bivouac at the Dead End nor those who go back along the road, but those who strike out left and right for a new goal, can hope to make more than a dull or an ephemeral contribution. The important masters of to-day are all those who, in their revolt against realistic imitation, do not borrow or revive styles, but seek to create them. Even if their only value is their novelty, — even if they find no new path but merely break a few bushes and stir a little dust, — theirs is the hope and the promise. What parallel has classical antiquity to offer to Bourdelle, Meštrović, Epstein, Archipenko in sculpture, to Gauguin, Cézanne, and the host of others in ultra-modern painting?

The easy answer is: "None! Ancient art was unable to progress beyond the Dead End of realism, and being unable to advance, stagnated and fell into utter decadence. By the fourth century after Christ, classical art is barbarous and helpless. The Dark Ages are upon the world."

That, I suggest, is the easy answer; but it is certainly not the correct one.

Classical painting passed beyond objective realism into impressionism. There are a great number of wall-frescoes from Roman imperial times wherein the effort to record high lights has led to a mere splashing of color, and shapes of objects have been disinte-

grated into tonal values of light. The painters at this period are not keeping to the measurable dimensions and contours of objects (which is what we must mean by "objective realism"), but are trying to record what the eye actually sees, the seemingly unrelated shapes into which the light is broken before it reaches the retina. But to paint, not the physical objects in a landscape, but the whole look of the landscape as so much colored light is actually a heightened stage of realism. The most real thing that we know is the raw sense-material of our experience: what we really see when we merely look — this is what the impressionists are trying to imitate, the raw sensuous presentation before the mind has worked on it and broken it up by its analysis into recognisable objects. Impressionism is, therefore, the ultimate stage of realism in painting: it is the Dead End.

And yet there is a sense in which impressionism marks a new direction and starts a new trend. All previous phases of painting have held to the external object as the imitable reality; but impressionism has shifted to the internal world. It pretends to reproduce a retinal aspect, something that may exist only for a human eye. Any picture is illusion since it is a flat evocation of a solid world; but whereas most pictures are pictures of the world, an impressionistic picture is a picture of a picture, since it seeks to reproduce a retinal impression which is not the real world, but one step removed from it. Impressionism accordingly drifts from an objective to a subjective sanction, and thereby starts a new trend. The next

stage will be to paint the world, not as it looks to a human eye, but as it happens to look to me; not the world as you see it, but as I see it; and the next step will be to paint the world not as I see it, but as I feel it or as I might like to feel it. Impressionism has shaded over into expressionism. Did classical painting make this step?

Some scholars are beginning to think that it did. However, thanks to the hold which the Oriental religions had upon the people of that time and the appeal of their mystical elements, expressionism seems to have taken a religious turn. What could not be painted directly might be shown indirectly. But an art of religious expressionism is probably too personal, too subjective to maintain itself. Like all mystical things, it exists only in the ecstasy of its author, and for the rest of the world must clothe itself in ritual, symbolism, magic. Less and less will painters be able to express a genuine religious emotion, more and more will they have to substitute a series of conventions. One thing is clear: they will have no use for mere objective realism. A plastic human being in a landscape drawn with all the illusion of perspective amid an envelopment of atmosphere and light is a page out of the ordinary world. The Italian Renaissance was content to paint its religious scenes in this profane setting, this irreligious mood, because the Renaissance was still on the highroad toward realism; but the over-sophisticated world of the dying Roman Empire could not so express itself. These late-pagan painters in sheer religious absorption in the Chris-

tianity of their day reft their figures of all perspective and all landscape; they used colors which were not the tones of the daily world but had significance as colors of death, of the underworld, of the highest heaven; their figures stared directly out at the passer-by, with whom they were to come into the mystical contact of adoration.² In short, everything that art had learned to do in its long advance toward realism, it now began to throw away as of the earthly, and returned to a manner superficially as undeveloped as the archaic, as crude as the primitive. Spiritually, the art may have continued to advance; from the viewpoint of realistic technique, it had receded into helplessness. Byzantine art, in which this whole movement finally found its resting place, is perhaps the world's most subtle art; but it was also and at the same time a mere crudity, out of which Duccio and Giotto could begin all over again the trend toward realism.

Whither will the painting of the twentieth century wend? Will it find the same escape as the classical world from the Dead End of realism, and move through expressionism into symbolism? Only if it has something to symbolise. This time it will scarcely be dominated by Oriental mysteries, Christian or otherwise. Though we are still by direct continuity Christian nations, we know nothing of the state of mind of the early votaries of Isis, Mithras, and Jesus. Will there nevertheless be some magic of things spiritual which will lead art away from the realistic *impasse*? I am content to wait and see; for the new trend may start even in our lifetime. If there is no such new

path, no new direction, then art will merely stagnate; and the western world will have to wait until the mechanistic scientific wave has spent itself and a new mentality arises.

And what of archaeology, with which presumably this lecture, like its predecessors, was to deal? I have been speculating and philosophising, but all the while I have secretly been getting ready to make a plea for just such a new brand of archaeologist, for an archaeologist who is able to philosophise and not afraid to speculate. For I do not see how, otherwise, there will be any humanistic value in archaeology. It is very generally assumed that archaeology is a science — or rather a pseudo-science, by which we mean a discipline which applies scientific methods to material which does not at present really lend itself to such treatment. There are only two courageous things to do with a pseudo-science: one is to omit the "pseudo," the other is to omit the "science." Both of these operations can be performed on archaeology. On the one hand, it can be made more rigidly scientific; and this in general is the trend which archaeology has been following in recent times with the perfection of procedure in excavation, with the steady emphasis on complete exactness in architectural inference, and the steady accumulation of objective criteria for dating and attributing vase-paintings and sculpture. On the other hand, as I have attempted to show by several instances, the data of archaeology, accumulated and classified in a wholly scientific spirit, may become the material for a much

broad, less accurate, but more philosophical treatment. I venture to think that the science is useless except in so far as its results are thus utilised. It is an utter waste of time accumulating exact information about classical antiquity unless classical antiquity itself is of value to modern men.

Greek and Latin have been very extensively jettisoned both in America and in Europe; but archaeology, because it is novel and because it purports to represent a scientific approach, has been encouraged and fostered. I have even heard the remark that the study of archaeology is supplanting and eliminating the study of Greek in our American colleges. The argument seems to be that archaeology, being a scientific historical-physical approach to antiquity, suits the modern trend of thought and education, whereas the study of Greek language and letters is fundamentally no more advanced in the twentieth than it was in the nineteenth century. There is involved in this general attitude the belief that there is no longer any prospect of progress in Greek philological and literary studies, whereas archaeology resembles the sciences in still having a future and perhaps a very exciting one. Greek is dead because it has been hewn and trimmed over and over again; archaeology is alive, and each year adds new branches to the tree. If we take the trouble to examine this argument closely, we shall discover that at the bottom of it is the fallacy that only science is worth encouraging. On this argument, religion is useless, because it does not get anywhere; the music of Beethoven and

Brahms is not worth listening to, because we have heard it before; there is no merit in painting a still-life of an old green bottle, two slices of water-melon, and a kitchen table-cloth, because these can all be assembled at any time by anyone who cares to have them around, and to paint them does not add to the edibility of the one or the usefulness of the other two. Is this merely a cheap jibe? I shall try to convince you that it is wholly pertinent and exactly sets forth the fallacy in current attitudes toward Greek and archaeology.

At bottom there is the venerable quarrel between the scientist and the humanist. For the scientist, progress is a reality because the sum total of knowledge is steadily increasing, if only by accumulation. For the humanist, progress is usually illusory, because what is vital to man is not so much the accumulation of knowledge as the attainment of wisdom. His emphasis is qualitative. The learning of any professor of biblical exegesis is vastly greater than was that of St. Francis of Assisi, but wholly irrelevant to anyone who can understand St. Francis. The one crucial argument for learning to read Greek is not that it will make one write a better English style, or read English more critically and more thoughtfully, or be of use in remembering scientific names or help in the long run somehow in business and finance (forlorn hope! and doubly useless nowadays!), but, much more simply, that he who reads Greek is a better grade of man than he who does not. Intellectual humility is supposed to be a democratic virtue; but it is morally wrong to be

humble at the cost of dissembling one's convictions and hiding one's attainments. Oxford clung to *Literae Humaniores* because Oxford hoped to breed a superior ruling class, from which England might recruit its statesmen and its intellectual leaders. Oxford may have to abandon the classics because the times demand more practical qualities, capable men rather than superior ones, shrewd leaders and politicians rather than philosophers. After all, even Plato recognised that his ideal state, which was to be governed wholly by philosophers, was not likely to be realised on earth. Yet this did not mean that his philosophy was folly or that his philosophers would not have been supremely remarkable men. The teaching of Greek in America has been handicapped because it has had largely to confine itself to teaching syntax, as though one should spend years in practising on the violin, yet were never allowed to play good music, learning all about scales and fingering and stopped strings, but almost nothing about the beauty of Beethoven. The linguistic obstacles to reading Sappho or Pindar are, of course, obvious. Modern colleges, despairing of making their students acquire any feeling for Greek as a living literary language, have tried to convey the effect through a rapid reading in standard English translations. But nobody has ever translated Sappho and nobody ever will, because the beauty of Sappho is the beauty of Greek and not the beauty of English.

Here archaeology has a unique advantage. True, the language of Greek architecture is not exactly the language of Gothic or even of that derived classical

dialect, the Renaissance; but at least it need not take laborious months and years to acquire. The language of Greek sculpture is even more readily understood, that of Greek vase drawings scarcely less so. *Ars una, mille species*. The barrier to Greek literature is much more formidable than that to Greek art.

But just as one can stultify Homer by too much insistence on the Aeolic dialect and the peculiarities of prosody, syntax, and inflection, the insistence on the methodological side of archaeology, the ambition to convert the pseudo-science into a genuine one, can destroy its general value for the modern world. To catalog and classify all the vases, statues, statuettes, coins, gems, and other objects is to perform a real service; but to leave it at that is to sin against the light. For these things which we are sifting and assorting and rearranging are not the harpoon-heads of the Esquimos of the Aleutian Islands or the bone carvings of Kamchatka, but the visible self-expression of a civilisation which has good claim to be considered the most important that the world has yet known.

And so it seems to follow that the true justification for classical archaeology is precisely the same as for Greek studies in general. Only if, like *Litterae Humaniores*, it can hope to make men better, by bringing them face to face with what is transcendently good in that most humanly valuable of all preceding civilisations can it rise out of the slough of an unimportant minor science. The present-day attempt to rescue archaeology at the expense of humanism is the greatest evil which can befall it; for it is only in so far

as archaeology illuminates the traditional classical humanism with a new radiance that it deserves to shed its beam at all. And just as the greatness of Greek studies is not the mere knowledge of Greek which they confer, but through knowledge of Greek a comprehension of high clear thought, self-conscious form, and flawless speech, — qualities which transcend all local and racial barriers, — so the greatness of archaeological studies cannot lie in the mere accumulation of a systematic knowledge of cultural and artistic antiquities.

My plea is not to sentimentalise nor emotionalise Greek art, but to understand it; to look at it not as the isolated specimen of a show-case, but *sub specie aeternitatis* with the perspective of the centuries, by learning how it evolves, by seizing its quickening passions and discovering the trends which are stronger than the individual artists. I have tried to outline briefly how one may survey the evolution of drawing and painting and sculpture, and how, by watching the Greek artistic genius pass through phases as inescapable as those of the waxing and waning moon, one can penetrate to the forces behind art and so learn to front the apparent chaos of the modern world with equanimity, because with understanding, and with the interest of enlightenment instead of the sheer bewilderment of incomprehension. To understand is to be sane, and if no other reward comes to the speculative archaeologist in his sweeping survey of the centuries, surely this is enough: to be sane. Here at least is an ideal value in archaeology great enough for any humanist.

NOTES

I

1. But if "Proteus" represents the Pharaoh contemporary with the Trojan War, as Herodotus (Book ii, 112, 118) was informed by Egyptian priests, and if "Herakles" symbolises the Dorian invader, who may well have tried to master the Achæan version of the Cretan script current in Cadmean Thebes, then the high-priest in Plutarch's account knew his subject exactly, and we are left marvelling at the corollary that there were specimens of the Minoan-Achæan script still treasured in Egypt in classical times and perhaps even read and interpreted by the learned!
2. The curious may find the details of this archaeological investigation into the pre-Persian Parthenon in an article by B. H. Hill in the *American Journal of Archaeology* for 1912.
3. *American Journal of Archaeology*, 1932, pp. 313-326.

II

1. While these lectures were in press, the classical curator of the University Museum in Philadelphia has most appositely illustrated this remark by delving into the original memoranda of those who first uncovered the early Italic material for which this museum is renowned. New chronological connections, leading to important archaeological information, have been the welcome result.
2. For my small book, *The Greeks in Spain*.
3. Unless χρυσός, "gold," is Semitic, in which case it is very strange that the Mycenaean word for the metal should have been lost. Κόπρος, "copper," could easily be a later importation than χαλκός, "bronze," which is probably Aegean. The two words are not sharply distinguished in classical usage,

where χαλκός may mean either bronze or copper. Thus, in an inscription from Eleusis (*C. I. G.*, II², 1054 f.) it means first the alloy and immediately afterward the pure metal from which the alloy is to be made.

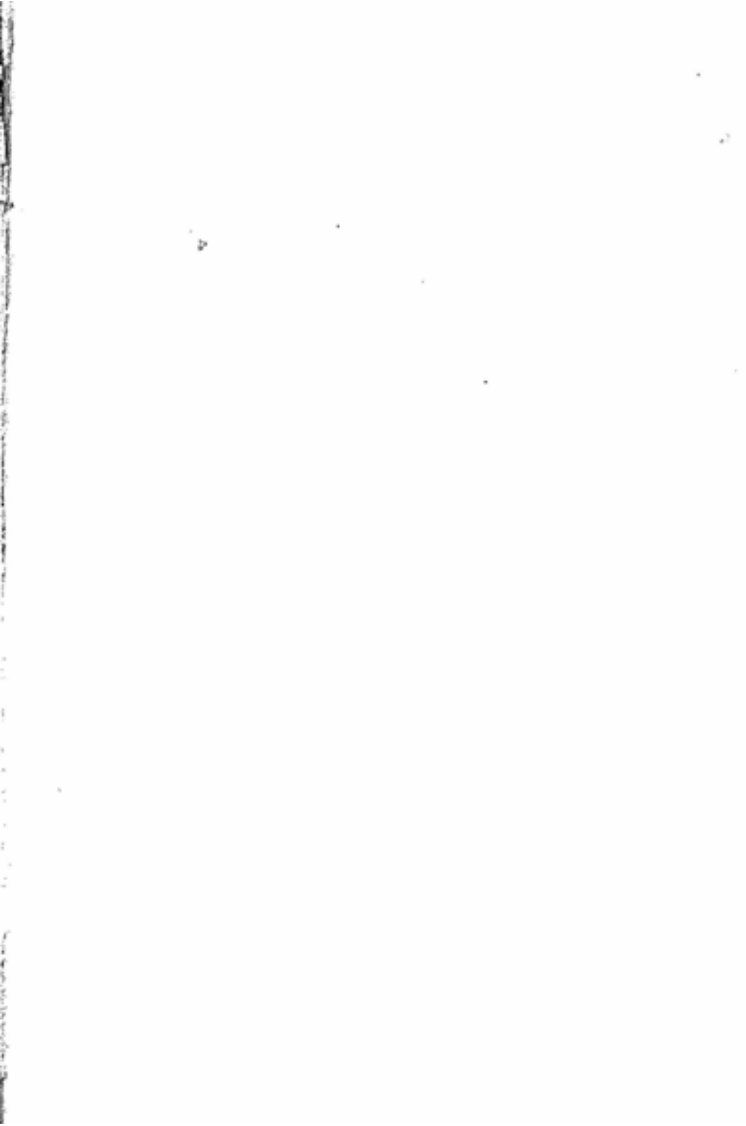
4. This lecture was delivered at Bryn Mawr College on the Horace White Foundation. The detailed argument appeared as an article entitled "The Antiquity of the Greek Alphabet," in the *American Journal of Archaeology*, 1933.

III

1. Diez & Demus, *Byzantine Mosaics in Greece*, Harvard University Press, 1931.

IV

1. In the second chapter of the work mentioned in the preceding note there is a most informative discussion of the origin and evolution of the hieratic style in East Roman art. The new *locus classicus* for this movement is Dura (Breasted, *Oriental Forerunners of Byzantine Painting*, University of Chicago Press, 1924).



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